TWENTY-SECOND ANNUAL REPORT

OF THE

· SANITARY COMMISSIONER FOR BENGAL.

YEAR 1880.

BY

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OF THE

SANITARY COMMISSIONER FOR BENGAL

YEAR 1889.

SECTION I—METEOROLOGY.

SECTION II—EUROPEAN ARMY.

SECTION III—NATIVE ARMY.

SECTION IV—JAILS.

• Under the orders of the Government of India the above sections are not to be dealt with in Provincial Sanitary Reports, but are to be included only in the Annual Report of the Sanitary Commissioner with the Government of India.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

2. The last Census of Bengal was taken in 1881 and disclosed a population of 65,859,534. This figure has since been taken as the basis of all calculations in the Annual Sanitary Reports of this Province. There is no doubt, however, that the population of Bengal is now greater than it was in 1881, but there is some difficulty in estimating how much greater it is. A fairly accurate method of doing so (if registration could be depended on) would be by adding to the census figures of 1881 the number by which the births since then have exceeded the deaths and the excess of immigration over emigration; but in Bengal this method of calculation cannot be adopted, as, under present arrangements, births are only registered in towns and are not registered in rural areas. The English method of estimating population in intercensal years is to assume that the rate of increase which obtained in the interval between the last two enumerations has been maintained in the succeeding years, and it appears that the Registrar-General of England has found this method to be trustworthy. On, this principle the population of Bengal may now be estimated at 74,482,274.

BIRTHS.

3. As stated in the preceding paragraph, births are not registered in rural areas, but in towns only. In last year's Report it was stated that these events used at one time to be registered in rural circles as well as in towns, but that as the registration was extremely imperfect, and consequently of too little value to warrant its continuance, it was discontinued under the orders of the Government of Bengal. I think, however, that the time has arrived for the reintroduction of the registration of births in rural areas, as in its absence the vital statistics of the Province are incomplete. In other Provinces births are registered in rural areas as well as in towns, and there is no reason why Bengal should be backward in this respect.

4. There are 148 Municipal Towns in Bengal, and births are at present registered in 137 of them. The aggregate census population of these towns is 2,422,994, and it will be seen from Annual Form I attached to this Report that in the year under review 55,166 births were registered in them, against 53,972 births in 134 towns containing a population of 2,615,716 in 1888. The figures for 1889 give a birth-rate of 22.76 per 1,000 of the population, and those for 1888 a birth-rate of 20.63 per 1,000. The total male births numbered 29,218 (ratio 12.05), and the female births 25,948 (ratio 10.70), the former being to the latter in the proportion of 1,126 to 1,000, against 1,134 in the previous year.

5. As usual, Christians returned the highest birth-rate, viz., 27.75 per 1,000 of the population, Mahomedans come next Nationality.

1,000 of the population, Mahomedans come next (24.28), then Hindus (22.86), then Other Classes (17.38), and Budhists last (7.53). In 1888 the order was—Christians (24.85), Other Classes (22.47), Mahomedans (21.27), Hindus (20.69), and Budhists (13.05).

6. The total number of registered deaths in towns as usual exceeded the births, the excess of deaths over births per 1,000 of the population being 3.18. At first sight this result points to one of two conclusions—either that the registration of births must be very much neglected, or that the sanitary condition of the towns which return an excess of deaths over births must be very bad indeed; but on closer examination it will be found that neither of these conclusions can positively be said to be the only cause of the result. There is not

indeed; but on closer examination it will be found that neither of these conclusions can positively be said to be the only cause of the result. There is not the slightest doubt, as everybody knows who has experience of mofussil towns, that a larger proportion of births than deaths escape registration, and that many towns are in an insanitary condition, but a reference to the population of towns will show that the excess of deaths over births is in some measure due to the excess of male over female population. It is worthy of notice that in the towns which have a larger male than female population, the deaths exceed the births, while in those which have a larger female population the births exceed the deaths.

7. The following statement shows in order of sequence the towns which Approximately correct, moderate. returned approximately correct results of birth ly correct, and defective results of registration in 1889, those which returned moder-birth registration. ately correct results, and those which returned manifestly inaccurate figures:—

APPR	OXIM	ATE	LY CORRECT	B.KSU	LTB.		MODERATELY CORRECT RESULTS.				6 Very Drynotive results.						
District	s,		Town	B.,		Ratio per mille.	Distric	ts.		Towns	i.		Ratio per mille.	Distric io.	Town		•
Durbhanga			Madhubani	***		#2.5 5	Murshedabad			City Murshed	abad		20.87	Mymensing	Muktagacha	***	
Monghyz	***	•	Jamaipore	•••	***	45.71	Chumparun	•••	•••	Motihari	***		29.78	Backerganj	. Jhalakati	•••	
Southal Pergui	nuahs		Dumks	***	•	43-85	34-Pergunnal	18		Nulhatti	•		- 190 '67	24-Pergunnahs	. Goberdangs	, 	
Pubna	•••	•••	Pubna	•••	•••	48-29	Maldah	•••	•••	Maidsh			96-97	Mymensing	37	***	
Mozufferpore	•••		Sitan arki	•••		42.44	Mymensing	•••	,	Jamalpore.	304		28189	Murshedabad	. Jungipore	***	
Backerganj	***		Perozeporo	•••	•••	40*93	Serampore	•••		Utterpara	*10		28:67	24-Pergunnahi	. Baduria	•••	
Khu na	•••	•	Khulna		**	88.30	Bhagulpore	•••	***	Bhagulpore	444]	28'57	Mymensing	. Tangail	,	
Champarun	•••		Bettish	***	*	87*95	Bogra	***	•••	Sherpur	***	•••	28*45*	84-Pergannahs 😘 💣	. South Silverbar	1 ,,,	

APPR	OK1	MA.	r B I	Y CORRECT RES	ULTS.		• Modera	TBLY	CORRECT RESULTS.		Very 1	EFECTIVE RESULTS.	
District	ie.			Towns.		Ratio per mille.	Districts.		Towns.	Ratio per mille.	Districts.	Towns.	Ratio per mills
gore	_ _	•		Mohespore		86.71	Shahabad		Jugdishpore	28:45	Murshedabad	Kandi	7'7
012			.	Sewan	•••	36.08	Midnapore		Ghattal	28.33	Backerganj	Barisal	4.8
hahya,				Rampore Beaules	sh	35 92	Darjiling		Darjiling	27.79	Ditto	Nalohitti	8.2
shli				Serampore	•••	85.66	24-Pergunnahs		North Dum-Dum	27168	24-Pergunnahs	Taki	8.2
ack		٠,		Kendrapara		34-97	Rungpore		Rungpore	27.62	Nuddea	Birnagar	8.7
napore				Ramjibanpore	**1	84'74	24-Pergunnaha		North Barrackpore	28.75	Mymensing	Kishoreganj	8.4
aribagh				Hazaribagh		31.49	Darjiling		Kurseong	26.23	Nudden	Nuddes	9"
ghyr				Mongbyr	•••	83'74	Cuttack		Jajipore	26.2	Noakhali	Sudbaram	10:
38.				Narainganj	•••	83.21	Sarun		Chupra	26.37	Chittagong	Cox's Besar	10
ersh	,,,			Brahmanberia		83-84	Midnapore		Tumlook	26.30	Khulna	Chunduria	11.
hhangs				Durbhanga		83.52	Shahabad		Dumraon	26.34	Nuddea	Ranaghat	11.
abad		_		Basseram	•••	83.00	Sonthal Pergunnal	u	Rajmehal	20 04	24-Pergunnahs	Cossipore and Chitpore	11,
		₹.		Jehanabad		32.72	Midnapore		Chundrakona	25.78	Chittagong	Chittagong	12
erah				Comillah		32.65	Burdwan		Cutwa	25.21	Patna	Patna	12
ribagh				Chattra		32.43	Bankura		Bankura	25:48	Khulna	Satkhira	18
na.				Debhatta	•••	31.91	Durbhanga		Roserah	25.04	24-Pergunnaha	Maniektolla	18
rgunnah				Rajpore		31.86	Shahabad	•••	Arrah	24.73	Sonthal Pergunnaha	Deoghur	14
li				Rughli		31.25	Burdwan		Dainhat	24.28	Shahabad	Buxar	14
les				Kustia		31.20	Faridpore		Madaripore	23.08	Gys	Arungabad	15
ah				English Bazar		30.84	Monghyr		Shaikpura	23.96	Purneah	Purneah	10
nbad				Bhabua		30.80	Burdwan	,	Burdwan	28.94	Hughli	Bhaddressar	12
hum	•••			Purulia	•••	30.84	Poori		Poori	23-92	24-Pergunnahs	Bassirhat	11
	•••			Revilganj		80.26	Mozufferpore		Lalganj	23.71	Nuddea	Meherpore	11
n ensing				ar	•••	30.19	24-Pergunnahs		Joynagore	23.68	Midnapore	Midnapore	1:
				South Dum-Dum		30'18	Pubna	•••	Sorajganj	23.57	Singbhum	Chybassa	11
ergunnah:				Kumerkhali		30.12	Patna	,	Behar	23.46	Burdwan	Culus	1
den	•••		•••	Rumerknan	•••	""	Dinajpur		Dinajpur	23-25	Birbhum	800ri	10
							· · .		Marine b	23.21	24-Pergunnahs	Bariepore	1 .
							3013	•••	Khirpai	80.10		Rougenskhi	1
								•••	B		1_	Lagrana	ر ل
							n	•••	Dunal sala	00.04		Jehanabad	Ι,
			•	•			0-4		_			Danahi	Ι,
				•			1	•••	l	-		Denne	Ί,
							Monghyr	•••	Burhia			Cuttack	Ί,
					•		Bogra	•••	Bogra		i	June Lucius	Ί,
						1	Serampore	***	Kotrung			0	Ί,
				ŀ		1	Faridpore	•••	1	22.21		4	Ί,
						İ	24-Pergunn ahs	••]	21.9		(Ί,
						}	Monghyr	***	Jamooi	1	. "	0	١.
						1	Gys	•••	į .	21.8:			Ł
							Mozusterpore	***		21.67	1		1
							Howrah	***	Bali	20.9:	1	· •	- 1
						1	Patna	••	Barh	20.71	Serampore	Baidyabattı	.] 1
							Bankura	***	Bissenpur	. 2017	_1 /	*	1
						1	24-Pergunnahs	•••	Baranagore	20.6	「 }		
						1	Mozufferpore	•••	Mosufferpore	. 20-20	3		1

It will be seen that the highest results were returned from Madhubani in Durbhanga, Jamalpore in Monghyr, Dumka in Sonthal Pergunnahs, Pubna, Sitamarhi in Mozufferpore, and Perozepore in Backerganj, in all of which the recorded birth-rate exceeded 40 per mille—the supposed standard birth-rate in India. The lowest results were returned from Muktagacha in Mymensing, Jhalakati in Backerganj, Goberdanga in 24-Pergunnahs, Nasirabad in Mymensing, Jungipore in Murshedabad, Baduria in 24-Pergunnahs, Tangail in Mymensing, South Suburban, Kandi in Murshedabad, Barisal and Nalchitti in Backerganj, Taki in 24-Pergunnahs, Birnagar in Nuddea, Kishoreganj in Mymensing, and Nuddea, in all of which the birth-rate was below 10 per mille. In last year's Report the ridiculously low birth-rate returned from the towns of Jhalakati in Backerganj and Muktagacha in Mymensing was brought prominently to the notice of Government. This year again the figures returned from these

towns are palpably inaccurate, and so, but in a lesser degree, are all the figures returned from all the towns shown in the very defective results column of the above statement. Taken as a whole, however, there is an advancement towards accuracy in the registration of births in towns which is encouraging.

DEATHS.

The total number of deaths registered in Bengal during 1889, not including 41,994 still-births, amounted to 1,597,478, against Number registered. 1,515,735 in 1888, and an average of 1,470,558 in the five years 1884—88. These figures correspond to annual death-rates of 24.25, 22.94, and 22.32 respectively. It will be observed that the death-rate of 1889 was in excess of both the past periods with which it is compared, but as the year under review was not, in the opinion of the local medical officers, a more unhealthy one on the whole than 1888, the higher death-rate can only be ascribed to better registration. But if the population of Bengal be estimated at 74,482,274, the death-rate for 1889 would be 21.44. Of the 1,597,478 deaths registered in 1889, 856,574 were males and 740,904 females, the former being to the latter in the proportion of 1,175 to 1,000, against 1,164 in the preceding year. 9. Divided into class or nationality, the deaths

According to Class or Nationality. were as follows:-

				Inl	889.	In 1	888.	Iz 188	4—88.			INCREASE CREASE PARED 1884	WITH
				Deaths.	Ratio per mille.	Deaths.	Rutio per mille,	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.
Christians Hindus Mahomedans Budhists Other Classes		•••	···	1,553 1,053,469 505,481 1,485 35,290	15:99 24:65 23:74 21:16 21:17	1,620 978,906 498,837 1,116 35,056	15.89 22.84 23.35 16.50 21.02	1,251 951,463 486,938 1,173 29,533	12.88 22.27 22.87 14.73 17.71	67 D 74,563 I 6,844 I 869 I 234 I	10 I 1:81 I :39 I 4:66 I :15 I	302 I 101,806 I 18,543 I 512 I 5,757 I	8'11 I 2'38 I '87 I 6'43 I 8'46 I

It will be seen that, compared with the figures of 1888 and the five years 1884-88, there was an increase in the year under report in the number of deaths recorded under all heads except Christians, under which there was a trifling decrease as compared with 1888. The ratios per mille, however, under all heads were greater in 1889 than in 1888 or 1884—88. Prior to 1889, deaths occurring among non-Asiatics and mixed races were not included under the head Christians, which included Native Christians only; but since the beginning of 1889, the heading Christians includes, under the orders of Government, all believers in Christ, irrespective of nationality.

10. The following statement shows the mortality according to age of the years 1889, 1888, and the average of the five According to Age and Sex. years 1884—88:—

	•	266,380 172'07 26'70 12',651 26'70 12'76 78.566 11'06 82',656 16'51 172,217 15'60	In 1	H88.	Is 188	4— 88.	INCREAS CREASE PARED 186	WITH	INCREASE CREASE PARED 1884	AS COM-	
•		Deaths.	per	Deaths.	Rutio per mille.	Deaths.	Ratio per mills.	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.
Under I year 1 year and under 5 years 5 to 10 years	•••	217,651	26.70	252,957 211,518 119,729	162.88 25.88 12.10	209,234 212,446 121,584	135·16 26·06 12·31	13,423 I 6,188 I 6,270 I	9.16 I .82 I .66 I	57,146 I 5,205 I 4,415 I	36-91 / -64 / -45 /
10 15		78,566	11.46	71,199	10.84	71,569	10.62	7,367 I	1.15 L	6,907 I	1.04 Z
15 ., 20 20 ., 80	•••			78,002 164,578	14°54 14°85	78,236 167,742	14.64 15.20	9,554 I 7,644 I	1.97 I .75 I	9,320 I 4,475 I	1.87 I .40 I
30 , 40	•••	166,002	17:44	160,408	16.82	161,110	16'98	5,594 Z	·62 I	4,892 I	·61 I
40 ,, 50 .,	•••	146,366 128,108	28:00 82:87	139,757 124,207	21.87 31.28	188,797	21·81 81·26	6,609 I 5,901 T	1.13 I 1.59 I	7,560 I 6,204 I	1·19 I 1·61 I
60 years and upwards	•••	213,638	57.69	200,885	58.59	192,984	52.10	13,248 I	4.10 I	20,699 I	5.89 I

The mortality of all the age periods was higher in 1889 than in 1888 or the average of the five years 1884-88; but, as usual, the death-rate was highest among infants under one year of age, the ratio per mille in 1889 being 9.16 in excess of 1888 and 36.91 in excess of the average rate of the five years 1884—88. In last year's Report I remarked that infant mortality was apparently increasing. The figures of 1889 bear out that statement. The increase in 1889 is no doubt due, in some measure, to better registration, but that does not altogether account for the large excess which I fear is due to causes of local insanitation and the prevailing social condition of the people. The mortality among children over one year and under five years of age is also much higher than it ought to be, and the large number of deaths in

that period of life is no doubt due to the same cause as the high rate of infant mortality. The age period of greatest immunity during the year under report was, as is generally the case, between the ages of 10 and 15, the rate being 11.66 per mille, against 10.54 in 1888. The mortality among persons 60 years of age and upwards was at the rate of 57.69 in 1889, against 58.50 in 1888 and 52.10 in 1884. 53.59 in 1888 and 52.10 in 1884—88. The death-rate of this age period in 1889 was thus 4.10 in excess of 1888 and 5.59 in excess of 1884—88. The deaths by sexes according to age will be found in Annual Form IV attached to this Report. The following statement shows the rates of mortality distributed

According to months.

according to months. Detailed information under this head will be found in Annual Form III attached to this Report:—

•			****		January	Fehru- ary.	March.	April.	May.	June.	July.	August.	Neptem- ber.	October.	Novem- ber.	Decem- ber.
1889 1886	 	···		:::	1·91 2·09	1:46 1:59	1.72 1.75	2:38 1:99	1.74 1.76	1.64 1.50	2·09 1·72	1.62 1.62	2.05 1.85	2.50 3.50	2·24 2·12	2.80 2.21

The most unhealthy months of 1889 were April, July, September, October, November, and December, while the most unhealthy months of 1888 were October, November, December, and January. These are usually the most unhealthy months of the year. The high rate of mortality in 1889 in April and July was due principally to an unusually large number of deaths from cholera in those months. April was exceptionally hot, and the rains were late in breaking.

The statement in the margin compares the mortality from cholera, Comparative mortality in Bengal, Behar, Orissa, and small pox, fevers, and bowel-hota Nagpore. complaints in Bengal, Behar,

Chota Nagpore.

		SECRETARIA PROPERTY.			
	Jn 1889.	In 1488.	In 1884—88.	increase or decrease as com- pared with 1888.	Increase or decrese as com- pared with 1984—88.
Cholora.					
Orisan Behar Bengal Ohota Nagporo	12:82 2:01 1:99 1:99	2·15 1·61 1·66 1·88	4.28 1.99 2.07 1.41	10°67 I *40 I *83 I *11 J	8'54 I '02 I '08 D '58 I
Small-pox.			ĺ		
Orissa Hehar Bankal Ohota Nagporo	*84 *20 *06 *06	*36 *16 *02 *02	*83 *23 *03 *09	*02 D *04 I *04 I *04 I	*01 I *68 D *03 I *03 D
• Fevers.					
Bengal a Beliar Chota Nagpore Orissa	17:61 16:71 15:62 9:53	17°08 16°08 17°49 7°45	17:23 15:45 11:18 7:41	*07 D *68 I 1*87 D 2*08 I	*38 I 1 26 I 1 44 I 2 12 I
Bowel-complaints.	•				
Orissa Uhota Nagpore Bengal Behar	3°71 1°44 °59 °54	8:08 1:58 *63 *52	8·10 1·28 ·64 ·71	'63 I '14 // '04 D '02 I	*61 I *21 I *05 D *17 D

Comparative mortality in Urban and Rural Circles.

Orissa, and Chota Nagpore during the three periods 1889, 1888, and the average of the five years 1884—88, and gives a general idea of the incidence of disease in Bengal. As usual, mortality from cholera, small-pox, and bowel-complaints was highest in Orissa, and fever as usual was highest in Bengal.

The following state-13. ment compares the rates of mortality the several \mathbf{from} death-causes in urban and rural circles during the three periods 1889, 1888, and the average of the five years 1884-88:-

,			In 188	9.		In 1890	3.	In	1884-	38.	OR	NCREAS DECLE. LPARED 1888.	ASE	AS CO	Increas Decrea Mpared 1884—88.	.SE
		Urban.	Bural.	Province.	Urben.	Rural.	Province.	Urban,	Bural.	Province.	Urban.	Rural.	Province.	Urben.	Raral.	Proviyoe.
Oholers		\$'61 '29 10'84 8'05 '52 6'70	2.56 12 16.93 72 46 8.41	2.59 13 16.72 80 46 3.52	4:44 *16 10:30 2:97 *45 6:51	1.58 -09 16.76 -70 -40 5.31	1.68 .00 16.53 .78 .40 8.43	3.58 .37 11.42 3.03 .46 5.66	3.07 .11 16.02 .76 .41 2.85	2·12 ·12 ·15·87 ·84 ·41 2·94	*83 D *18 I *54 I *08 I *07 I *19 I	'98 / '03 / '16 / '08 / '06 / '10 /	'91 I '04 I '19 I '02 I '08 I '09 I	'08 I '08 D '08 I '08 I '08 I	'49 I '01 I '90 I '04 D '05 I '56 I	'47 I '01 I '86 I '04 D (6 I '58 I
TOTAL	***	25.03	24.55	24.52	24.86	22.87	22.04	24.24	22.52	22.23	'17 <i>I</i>	1.35 1	1'31 I	'49 I	1.97 1	1 188 Z

It will be seen that there was an increase in 1889 in the total registered deathrates both of towns and of rural areas, not only as compared with the previous year, but also with the average of the five years 1884—88. The death-rate from the several diseases, except fever, was higher in towns than in rural areas, which is in accordance with the experience of past years. The death-rate from fever, as usual, was considerably higher in rural areas than in towns, which is no doubt due to the more defective nature of the drainage of rural areas than of towns.

The following statement shows in order of sequence the death-rates Death-rates of Districts and for 1889, 1888, and the average of the five years 1884—88 in districts exclusive of the principal Towns in order of sequence.

towns and in the principal towns of the Province, i.e., towns with a population of over 5,000 inhabitants:—

	•		io per 1,00 population			• '				1 18	atio per 1,0 populatio	
District	14,	In 1889	In 1888.	Mean! of 1884—35.	Districts	١.		Towns.	•	1881	1888.	Nean of 1884—88.
ri		44.47	21'48	24.21	Poori		•••			71.		50-88
iling		. 88.93 . 36.28		24·45	Manbhum Rungpore	•••	***	Rungpore	•••	. 47"	89.68	28.80 33.78
oaiguri khali		. 88·27 82·04	25.28	29:44 22:59	Serampore Burdwan	•••	,	Danisani	•••	400.0		\$0.88 38.68
neah		. 31.09	23.23	20.00	Gya	•••	***	Gya	•••	42	7 49.36	49.89
erganj nok		1 00.04	27.78	27°56 20°79	24 Pergunnaha Monshyr	•••	***	Cossipore	•••			created.
gbyr		. 30.21	27.99	28.02	Murshedabad	•••	•••	City Murshedabi		. 871	83-84	39.48
pur mu		. 28.05 27.48		25.62 25.62	Serampore *	•••	•••	The many	•••			28.77 24.41
ubad		. 27.06	25.79	27.48	Monghyr	•••	•••	Shaikpura	•••	. 301	5 27.72	84.75
ulpore		80.00	24.43	26°11 25°53	24-Pergunuahs Daces	•••	***	NY 1 4	•••	3 00 4 4 4		19·95 26·35
npore		26.88	20.01	19.11	Darjiling	•••	•••	Darjiling	•••	84	4 92.56	21.83
ro			22.80	28.95 27.27	24-Pergunnahs Dinajpur	••1	•••	Marine America	•••	1 941		28.86 21.97
hedabad		25.91	24.51	24'71	Hazaribagh	•••	***	Hazaribagh		. 82	86.06	26.85
shye ribagh		. 25·78 . 25·29	26.52	23.80	Mozufferpore Cuttack	•••	•••		•••	81 1	25.35	30.30 25.88
na. di	• • •	. 25 05		23.87 21.24	Hughli	***	•••	Hughli	•••	31.0		18.60 18.60
ah		24.41	82.04	24'18	Maldah	•••	***	English Bazar	•••	81	7 26.46	20.91
wan pore		. 24.10	21 08 27 37	21 60 26 68	Gya Durbhanga	•••	***	Daudnagore .	•••	. 31.1		25.98 27.44
ralı	•••	23.99	28.77	20.07	Sarun	•••	•••	Revilgani	•••	80.1	7 84.89	32.32
erab		80.00	20.60	16°50 26°63	24-Pergunnahs Monghyr	•••	•••	A4	•••	DA		26.21 26.21
rdugga		28.48	24·62 23·65	19.62	Purneah Burdwan	***	•••	Purneah	***	80	19.24	30.38
apore les	•••		23.65	81.44	Chumparun	•••	•••	Burawan Bettiah	•••	. 29	1 41.24	34.00
a	•••	04.00	23.41	28·41 16·76	Raishahyo Balasore	•••	•••	Rampore Beaule Balasore	ah .	56.		97 79 26:74
rgong r	•••	. 21.04	18:32	20.89	24-Pergunnaha	•••	•••	Augurpara	••• •	28	7 26.69	23.57
pore ura	•••		16.27	16·67 17·87	Julpaiguri Jessore	•••	•••	T	•••	28		51.82 55.93
hum		. 30.48	22.35	16.80	Shahabad	•••		Dumraon	•••	. 28	25 25 11	25.78
hum.	•		19.74	19·16 20·87	Loharduges Southal Pergun	nabs		The contract		28		17.51 21.73
msing		. 19.28	19.90	16.12	Pubna	•••		Pubna		28	9 29.47	32.16
rgunnahe al Pergu	nnaha	18.74 17.71	28·47 13·46	20°68 15°35	Singbhum Khulua	•••	***	Chyhassa Khulna	•••	27		22.52 20.80
hanga	•••	. 17.64	16'15	14.38	Patne	***	•••	Barrh		27	19.77	28.85
iparuu derpore	***		25.98 15.24	22·47 14·35	Bankura Mozufferpore	•••	• • •	1 -1	•••	27		21.48
•			1		Bhagulpore Shah-bad	•••	•••	There are an	•••	1 43444	8 27.84	37.97 18.16
			1 1		Murshedabad	•••	, ,	Berhampore	•••	. 24	8 21.60	27.19
		}	1		Sarun	•••	•••	(1illah	•••	94.4		84 16 25 39
		1	1. 1		Tipperah	•••	{	Brahmanberia	:	23	26.44	28.10
		1	1		Murshedabad Midnapore	•••	•••	() liver in all man la man a		L OB.		\$7.28 \$7.28
		1	1		Backergani	***	•••	Howrah		22"	1 21.68	23'45
		}	1		Howrah	•••	•••	D-13	•••	22	10 20·58	20.85
		1			Burdwan Dacca	•••	•••	Deco		1 000		24.51
		1	1 1		Sarun	•••	•••	Chupra		21.	19 13.80	18'36
		1	1		Midnapore Nuddes	•••	•••	**	•••	21	51 20.35	16.68
		1	1 1		Serampore	•••		Baidyabatti	•••	. 21	15'35	15.01
					Mymonsing Mozufferpore	•••	:::	M		20.0		25'41 22'36
		1]		Birbhum	•••		Scory	•••	70.0	18-86	21.61
		•	7		Mozufferpore Hugbli	•••		Jehanabad	•••	26.5	7.89	18.32 11.04
		1			Cuttack Midnapore	•••	•••	Cuttack		201	2 10.35	17:06
		1	1		Bankura	•••	:::	Sonamukhi .	•••	194	19 7.84	14:85 86:85
					Bogra Faridpore	•••		Bogra	•••	. 19.6	9 13.10	21·53
	•	1	1		Murshedabad	•••	••• [Kandi	•••	181	19:69	19.41
	•				Pubna Midnapore	•••	:::	Ghattal	•••		6 15.35	84°46 16'69
					Noakhali	•••	•••	Sudharam	•••	17'3	8 8 8	18.07
		1			Patna	•••	***	Behar	•••	, 18'7	4 21.80	20.02
		1			Shahabad	•••		Arrah		16.0	8 21.00	16.77
		1			Bankura	•••	***	Bishenpore	***	16-1	0 11.32	23.54
			1		Patna	***	{	Patna	•••	.4 151	8 21.09	28'52 12'38
					Chittagong	***		Chittagong	640 01 600 01	. 15'0	9 18.70	21.78
		1			24-Pergunnaha		{ }	Dagedakas		141	9 Newly (reated.
•		•	1		W. ddar		7	Nobodip	•••	. 184	8 10.68	20'70
		1	1		Nuddea	•••	{	Santipore	% ::	. 11.7	5 9.46	22.68 13.50
					24-Pergunnaha Nuddea	***		South Suburban	· •	117	12 79	14.75 11.40 17.59
			r		Mymensing	***	:::	William Street		10.5	8.45	17:50
•					24-Pergumahs		400	Baduria		81	7 10.65	11.96

15. A pleasing feature in the registration of deaths in Bengal during 1889 is the marked improvement effected both in district Officers and Municipal Commissioners in Registration.

1889 is the marked improvement effected both in districts and in towns—a fact which shows that the responsible officers are now taking greater personal interest in the matter. The circular

issued by Government in 1888, drawing the attention of all local officers, and especially of Municipal Commissioners, to the necessity of improving the registration of vital statistics, has had the desired effect of stimulating the energies of the authorities for whom it was intended; and although in some districts and towns near the bottom of the list it is evident that registration is still neglected, there is every reason to be satisfied with the progress made during the year under review in the Province taken as a whole. In 28 out of the 45 districts there was an improvement in registration in 1889, as compared with 1888 and the average of the five years 1884-88. The improvement was most marked in the districts of Poori, Balasore, Noakhali, Purheah, Cuttack, and Serampore. According to the reports of the local officers the health of these districts during 1889 was decidedly bad, and worse than in the past few years. The recorded mortality bears out the opinions of the local authorities. In towns there was an improvement in registration in 70 out of the 94 mentioned in the list. Last year there was a deterioration in 59 out of the 93 towns mentioned in that Report. In 1889, six out of the 94 towns returned • birth-rates of over 40 per mille, 23 between 30 and 40, 39 between 20 and 30, and 26 below 20 per mille. In 1888, eight towns returned death-rates of over 40, 11 between 30 and 40, 33 between 20 and 30, and 41 below 20 per mille. Last year I had occasion to bring to the notice of Government the palpable inaccuracy of the figures returned from the following municipalities: - South Suburban, Dinapore, Kustia, Bissenpore, Nobodip, Baduria, Santipore, Tangail, Faridpore, Kishoreganj, Sudharam, Jehanabad, Sonamukhi, and Ranaghat. This year it is my pleasing duty to report an improvement in registration in all these municipalities except South Suburban, Baduria, and Tangail, where I regret to say registration was even worse in 1889 than it was in 1888-a fact which reflects discredit on the Municipal Commissioners of those towns.

With the approval of Government, I issued a circular in October 1889 to all municipalities, drawing their attention to the many useful purposes which the registration of vital statistics fulfils, and the necessity for the collection and preservation of complete and accurate records relating to births and deaths. The circular, of which a copy is appended to this Report (see Appendix VI), is having a good effect. There are already signs of marked improvement in registration as evidenced by the statements published by this office weekly and monthly in the Calcutta Gazette. In future there is also to be a quarterly review of the vital statistics of the principal towns which is likely to be very

useful, and to result in a still further improvement of registration.

Comparison between vital statistics of mofusail towns with those of Calcutta.

	:	Ratio per 1,0	00 of population	-
	í		In Bongal t	
Births		20.19	22.76	
All causes		2 6·96	25.03	
Cholera		2·49	8.61	
Small-pox	•••	.16	·29	
Fevers		7:71	10.84	
Bowel-complain	its	3.07	8:05	
Injury	•••	.52	-52	
Other causes	•••	13 00	6.70	

16. It has been the practice in the Annual Reports of this Department to compare the vital statistics of mofussil towns with those of Calcutta, but every year a qualifying remark is made that the comparison cannot be altogether relied on, because registration in the mofussil is very imperfect. In the margin will be found the comparison for 1889, and as registration in the mofussil is improving, more reliance may now be

placed on the figures of Bengal towns.

Mortality of natives in Canton-ments.

17. The following statement shows the mortality among natives in the nine cantonments in Bengal:—

					erio t	eener: B	LATIO (07 DE.	ATHS 1	PDR 1,	000 o	y PC	PULAT	ion.	W-7		Incr	RASE O	e decre	ABB AS C	OMPARE	BTIW C	1888.
Names of Cantonments.	popu	rage lation.	Ohol	era,	8m po		Feve	rs.	Boy compl	vel- aints.	Inju	ıry.	Ot1		Tota	al.	ď	-por-		Leom.		CAUSES.	
•	1889.	1888.	1889.	1886.	1888	1888.	1889.	1888.	1889.	1886.	1880.	1688.	1889.	1868.	1889.	1888.	Chole	Smail	Feren	Bowel	Injury	Other	Total
Fort William Alipore Dum-Dum Barachore Larjiling Bura Dorunda Dinapore Cuttack	9,007 966 4,221 4,961 29: 541 9,166 18,181 4,471	1,044 4,223 5,089 238 088 2,227	1.12	1'83 '95 2'60 '59 24'34 3'17 2'23	*90 *85 2:45		25.75 8.69 20.03 18.70 5.86	9:84 1:91 5:20 11:90 4:29 6:98 28:28 9:78 3:58	95 8*26 8*07 4*21 8*89 6*00 2*11	1'87 14'96 '28 2'97 4'29 1'86 3'59 1'46	1.88	1 86	9°24 5°54 6°51 10°78	11*49 2:36 1*58 8*58 10*97 1*79 3*60 12*09	46'64 23'24 20'34	13:78 28:78 11:60 17:86 17:16 20:37 59:27 18:44 16:14	22:86D 2:04D 67D	7.45.I	1'06D 8'35I 4'27I 4'08D 91'46I 2'57D 1'96D 8'95I 1'78I	42D 6·10D 2·847 1·247 4·29D 2·137 2·417 ·687		8:38I *13.D *71.D 1:32.I 8:58.D 1:73.D 3:75.I 1:91.I 1:86.D	18:63.D 4:80.I 2:20.I
TOTAL	88,88	84,199	1'12	3.14	'50	,0 ₂	11.21	\$ 56	2.68	1.98	.86	*51	5'48	4'88	1.48	90'17	2.68.D	·48.I	1.42%	*76 <i>I</i>	·14 <i>D</i>	1.081	1.561

It will be seen that the total mortality was 1.28 more in 1889 than in 1888, the increase being chiefly under the head "Fevers." The fluctuation in the rates of the different cantonments is again most striking. The rate was highest in Dorunda (40.64) and lowest in Fort William (14.78). In 1888 it was highest in Dorunda (59.27) and lowest in Dum-Dum (11.60). It is not understood why the death-rate in the Dorunda cantonment, which is situated in a healthy climate, should be so much higher than the death-rate in the cantonments at Fort William, Dum-Dum, Barrackpore, and Buxa, which are situated in less healthy localities. The medical officer in charge of the Dorunda cantonment, reporting on the subject, says:—

"The entire mortality is high, especially that attributed to fever. The deaths reported undoubtedly occurred, but the population of the cantonment is, in my opinion, greatly understated. I have had an enumeration made of the inhabitants with the result of increasing the number to 2,787, which I consider as near as possible correct. The troops with families and followers alone amounted to 709 on the 1st January 1890. This would reduce the mortality rate to 31.57 per 1,000. As regards the causes of death, I have enquired into every one recorded, and have visited the houses in which many occurred. Bazartolla with a population of 397 shows 19 deaths, a rate of 47.85 per 1,000. Here I had the house pointed out where each fatality occurred. Some of these deaths were not of bonû fideresidents, and there are others which I have much doubt about, specially of infants. Though the number of deaths from fever has been overstated, there still will have been an excessive proportion, but I cannot attribute this to defective drainage. The houses of the non-military residents of cantonments are situated on generally sloping ground near a river-bed with numerous small ravines running into it, which rapidly carry off surface water. In the military lines fever cases produced only a small minority of the deaths. The reported cases are pretty generally scattered throughout the other different tollas, which are in some cases quite separated from each other, and in other instances semi-detached. There is one point between some of the tollas where water does get locked up, but I cannot see that people residing in its neighbourhood suffered more from fever than those in more distant quarters. I have invited the attention of the Station Staff Officer to this spot with a view to improving its drainage."

It is satisfactory to notice that there was a decrease of deaths from cholera during 1889 in all nine cantonments except Alipore, but fever unfortunately was accountable for more deaths in 1889 than in 1888 in five out of the nine cantonments, the largest increase being in the Darjiling convalescent cantonment. The high death-rate in Darjiling is not due to the climate or to bad drainage, but most probably to acts of imprudence on the part of the convalescent arrivals from the plains.

18. The number of European seamen who arrived in the Port of Calcutta

Sickness and mortality amount fell from 22,705 in 1888 to 20,662 during the year

European seamen in the Port of 1889. The daily average population was, how
Calcutta. ever, 1,626, against 1,510 in the previous year.

Including deaths out of hospital, the death-rates per mille of the last five years stand as follows:—

•	•				Cholera.	Other causes.	Total.
1885			•••	•••	4.72	25.99	30.71
1886	•••		•••	•••	11.61	33.53	45.14
1857					10.03	16.91	26.94
1888	•••			•••	10.59	27 15	37.74
1889	• • •	e _	•••	***	11 07	20.29	31.36

The total number of casualties among European seamen from all causes was 51, against 57 in 1888.

It is worthy of note that there were no admissions from small-pox, nor were there any from scurvy, during the year under report.

The average native floating population of the port is estimated at 25,630,

Sickness and mortality camong the Native Floating Population in the Port of Calcutta.

The number of deaths reported during the year was 129, or 5.03 per mille of the population, as compared with 148, or 5.77 per mille, in the previous year. From the foregoing figures it would appear that both the European and native populations of the river enjoyed better health during the year under report than in 1888.

19. It appears from the statistical returns received in this office that the health of the Province, as a whole was not so good during 1889 as in the preceding

year, but in the opinion of the local medical officers 1889 was not on the whole

Noakhali. Tipperah. Burdwan. Bankura. Birbhum. Shahabad. Mozufferpore. Hughli. Serampore. Howrah. Durbhanga. Sarun. Jessore. Murshedabad. Monghyr. Bhagulpore. Purneah. Julpaiguri. Southal Pergunnahs. Farid pore. Backerganj. Cuttack. Poori. Chittagong. Balasore.

a more unhealthy year than its predecessor. The increase of mortality shown by the figures may therefore be ascribed to better registration. The districts in which according to the figures the public health was worse in 1889 than in 1888 are shown in the margin. This agrees with the opinions of the local medical officers, except in the cases of Bankura, Howrah, Jessore, Dacca, Tipperah, Mozufferpore, and Sarun, where in the opinion of the medical officers in charge the public

health was not worse during the year under review than in the previous year. The outturn of crops was below the average in 18 out of 44 districts, in which the price of food-grain was consequently higher than the average.

SECTION VI.

HISTORY OF THE CHIEF DISEASES.

CHOLERA.

Provalence and Fatality of Province from cholera, of which 92,027 occurred choica in 1889.

Represent mortality rates of 2.59 (or 2.29 if the present population of Bengal be estimated at 74,482,274 as explained in paragraph 2 of this Report), 2.81, and 2.38 respectively per 1,000 of the population. In the previous year the mortality from cholera amounted to 111,391, or 1.68 per mille. The average of the five years 1884—88 was 139,942, or 2.12 per mille, and that of the decade 1877—88 was 122,769, or 1.91 per mille. The cholera of the year under review was thus more severe than that of the past periods with which it is compared. It was also more widespread than in 1888. The disease was present in every district, but, contrary to previous experience, affected rural more than urban circles in proportion to population. It prevailed epidemically in 96 registering circles, against 60 in 1888, severely in 68, against 75, with slight severity in 467, against 488, and was absent from 14, against 20 in the previous year. The number of villages attacked in 1889 was 26,548, against 19,386 in 1888, giving percentages of 11.52 in 1889 and 8.29 in 1888.

21. In obedience to the orders of the Government of India, I have had Cholera map and statement prepared and attached to this Report as Appendix Prescribed by the Government of II the prescribed map and its attendant statement, illustrating the distribution of the mortality from

India.

illustrating the distribution of the mortality from cholera in the different registering circles during 1889, but I would again urge that no useful purpose is served by the publication of such a cumbersome map and statement, which in not, I believe, even looked at by the majority of the readers of this Report; and the preparation of which only entails unnecessary additional labour both in my office and in that of the Surveyor-General, where the map is lithographed. This is not my individual opinion only, but also that of my two experienced predecessors who condemned the map and thought, as I think, that diagrams and small coloured maps, such as those incorporated in the body of this Report, might with advantage take its place. The diagrams and small maps are much more interesting and contain sufficient information for all likely practical purposes.

Seasonal incidence of Cholera in the Province and diagram show.

Out of the sixteen years with which it is compared, being surpassed in the total number of deaths recorded by only four years, viz., 1887, 1885, 1882, and 1876. As usual, the Province was comparatively free from cholera during the earlier months of the year. The disease prevailed with much severity in the hot weather before the rains set in, especially in the month of April, which was unusually hot and dry, the temperature, according to the published reports of the Meteorological Department, being abnormally high throughout the Province in that month; the excess over normal in some districts being as much as 8 degrees. In no other year has the number of cholera deaths in April exceeded the mortality of that month in 1889. Concurrent with the breaking of the rains, which were late in coming, the disease began to subside appreciably, and in October the mortality had fallen from the maximum of 33,003 which it reached in the month of April to a little over 5,000. In November there was a slight rise, which continued in December, the total

mortality in that month being 10,181.

23. The seasonal incidence of cholera in each of the four great divisions of which the Province is composed, viz., Bengal, in Bengal, Behar, Chota Nagpore, and Orissa, illustrated by diagrams. Map illustrating the character of the soil of Bengal and another showing rainfall in 1889.

Behar, Chota Nagpore, and Orissa, differs, as was explained in last year's Report, from the seasonal incidence of the disease in the Province taken as a whole, and seems to be influenced in a great measure by the character of the soil. The seasonal incidence of the disease of the soil of the seasonal incidence of the disease in the Province is illustrated.

incidence of the disease during 1889 in each of the four divisions is illustrated in the diagrams which follow the provincial diagram. A map illustrating the character of the soil of Bengal and another showing the rainfall during 1889 are also attached.

are/

iagram showing the Seasonal Incidence of Cholera, in Bongal Proper (Burdwan, Presidency, Rajshahye, Dacca, and Chittagong Divisions) during 1889.

NUMBER DEATHS. 16,000 15,500 15,000 14,500 14,000 13,500 13,000 12,500 12,000 11,500 11,000 10,500 10,000 9,500 9,000 8,500 8,000 7,500 7,000 6,500 6,000 5,500 5,000 4,500 4,000 8,500 8,000 2,500 2,000 1,500 1,000 500

The total mortality in Bengal Proper was 1'99 per 1,000 of population and total rainfall 73'95 inches.

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Diagram showing the Seasonal Incidence of Cholera in Behar (Bhagulpore and Patna Divisions) during the year 1889.

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The total mortality in Behar was 200 per 1,000 of population and the total rainfall $58^{\circ}55$ inches.

Diagram showing the Seasonal Incidence of Cholora in Orissa Division during the year 1889.

NUMBER OF DEATHS. 15,500 15,000 14,500 14,000 18,500 18,000 12,500 12,000 11,500 11,000 10,800 10,000 9,500 9,000 8,500 8,000 7.500 7,000 6,500 6,000 B,500 5,000 4,500 4,000 8,500 8,000 2,500 2,000 1,500) (VS) bus; Ratio of Deaths per 1,000 of Population .06 18 1.84 2*94 2'84 .20 15 '11 '52 **'42** Rainfall 18 51 2'61 10.92 11.39 13.44 5.68 14

The total mortality in Orissa was 12'ey : 000 of population and the total rains il 65'86 inches,

Diagram showing the Seasonal Incidence of Cholera in Chota Nagpore Division during the year 1889.

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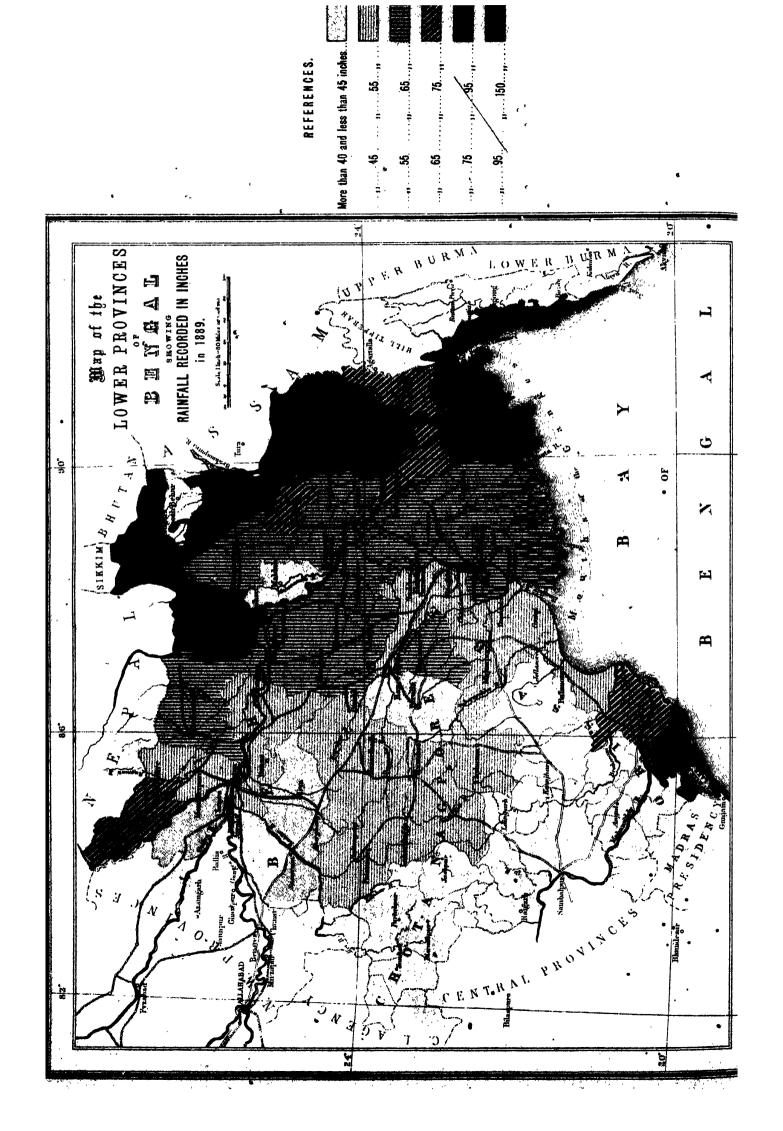
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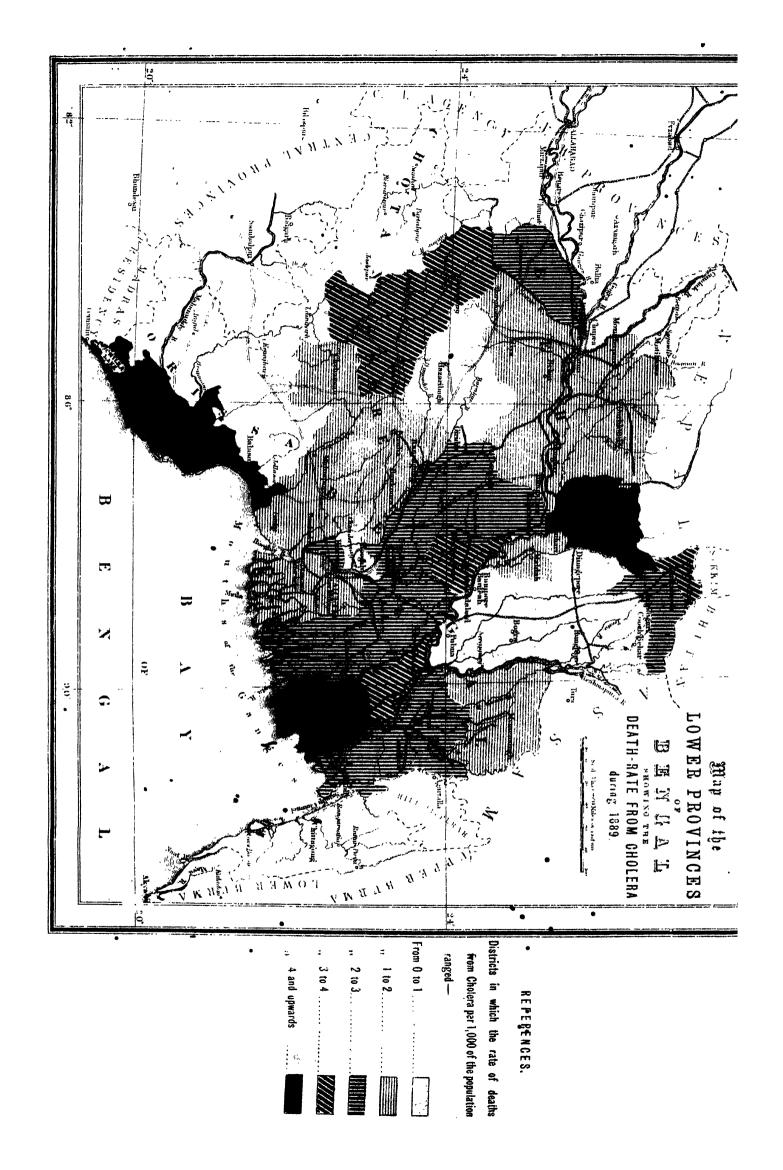
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The figures in the map represent the elevation





agram and map showing the alence of Cholera in 1889 in district of the Province.

24. The following diagram and the shaded map on the opposite page show the incidence of cholera mortality in each district of the Province during 1889:—

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25. It will be seen that the districts in which cholera was most prevalent. during the year under report were Poori, Balasore, Purneah, and Cuttack, where the rates of mortality were 21.01, 12.74, 9.60, and 8.29 respectively. The Districts which suffered most and those which suffered least. districts which suffered least were Bogra, Dinajpur, Chittagong, and Chumparun, where the rates of mortality were 23, 32, 34, and 42 respectively. Last year Chumparun, Backerganj, and the 24-Pergunnahs suffered most, and Dinajpur, Birbhum, and Darjiling least. The diminution during the year under report in the cholera mortality of Chumparun, and the large increase in Purneah and in all the districts of the Orissa Division, especially Poori, in the

most noticeable feature in the cholera history of the year under review.

The very large number of deaths from cholera which have occurred during the last few years in Chumparun has been attributed, and I think rightly, chiefly to the overcrowding of the cultivators who assemble in April for the opium weighments at Motihari, where the sanitary arrangements were defective and the water-supply impure. Some valuable suggestions were made in 1888 by Dr. R. D. Murray, the late Civil Surgeon, for improving matters in this respect, and under the orders of Government the Board of Revenue have already had many of the recommendations carried out with the happy result that the cholera mortality of Chumparun fell from 11,414, or 6.62 per mille, in 1883 to 740, or 42 per mille, in 1889. The present Civil Surgeon of Chumparun, Dr. Boville, thinks, however, that it can hardly be said yet that the precautions taken in 1889 prevented a cholera epidemic, for in previous years equally good results have been attained without them. The rainfall, he thinks, has a good deal to do with epidemic outbreaks of cholera in Chumparun.

"There are some grounds for thinking that rain in April is connected with epidemic cholera appearing in the early part of the year, because in 1888 and 1887, when there was an unusual rainfall in April, it broke out severely in June and May respectively; while in 1885, which was also a cholera year, there was only a slight shower (0.02 inches) in April, and the disease did not manifest itself severely until August and September. The gathering of opium cultivators at the weighments cannot therefore be held in itself sufficient to originate cholera, because they collect every year at the godowns under very similar circumstances (except the rainfall), while epidemic cholera only occurs occasionally."

As an additional precaution, however, to those recommended by Dr. R. D. Murray (see last year's Sanitary Report, pages 12 and 13), Dr. Boville recommends that every possible endeavour should be made on the part of the Opium Department to diminish the number of opium cultivators present and to shorten their stay at the godown. It appears that under the present system some cultivators have the some in five or six days about the godown, while it would perhaps be possible under a change of system to limit their stay to 48 hours. Dr. Boville's proposal is worthy of consideration, and should, if possible, be carried out.

The death-rate from cholera in the Purneah district rose from .47 per mille in 1888 to 9.60 during the year under report. The epidemic was the severest known for years, and prevailed with great intensity from March to May, carrying off over 17,000 persons during those months. The Purneah district is within the endemic area, and is a notorious district for cholera prevalence. It is one of those districts in which cholera is known to have existed prior to the historic epidemic of 1817. The epidemic of 1889 is supposed to have originated at the Karagola fair, which is held on the banks of the Ganges from about the 11th February to about the middle of the month. The disease was most severe in the centre, west and north-west of the district, where it is estimated that one man in 70 died of it. The attendance at the Karagola fair on the three most important days was estimated at 400,000 souls, and the total number of persons who attended the fair is said to have been over a lakh. There was no outbreak of the disease in the fair itself, but as the gathering began to disperse, cases of preliminary diarrhoa, if not actually of cholera, are said to have occurred on the roads leading from the fair, especially on the Ganges and Darjiling road, and. from this road the Civil Medical Officer was of opinion that the disease was conveyed in the first instance by human agency to places near or remote that were quite unaffected previously. There can be little doubt that overcrowding at the mêta, fatigue, indiscriminate use of food (for the most part uncooked), free use of decaying vegetables and fruits, &c., and inadequate sanitary

precautions were the causes of the outbreak. This year (1890) better sanitary arrangements appear to have been made at the fair, and up to date I have heard of no epidemic outbreak of cholera in Purneah. The insufficiency and impurity of the water-supply along the principal roads and communications in the district of Purneah is undoubtedly a prolific source of cholera in that and other districts approached through Purneah. I have already drawn attention to this matter in a special report lately submitted to Government on the cause of cholera in the Julpaiguri Doars and Darjiling Terai. Until the water-supply of the Province is improved, and adequate sanitary arrangements made at fairs and other places, where large numbers of people assemble, I am afraid there will be little or no diminution of the death-rate from cholera in Bengal.

The largest number of deaths from cholera in the whole Province occurred in Poori, where the mortality from this cause rose from 2,129, or 2.39 per mille, in 1888 to 18,669, or 21.01, in 1889. The history and cause of the aref-disease is best described in the words of Dr. Walsh, the Civil Surgeon of Poori, who has written an admirable report on the subject. Dr. Walsh says:

• "The increase of cases from February to March coincides with the arrival of 20,000 pilgrims for the Dol Jatra. These people are tired, and, as regards health, below par; probably also one or two of them are already suffering from the premonitory stage of cholera when they enter the town. While in Poori they eat hardly anything but the mahaprosad rice prepared in the temple and the half-ripe fruit and vegetables which are exposed for sale in the streets. The mahaprosad is often sold to them after it has been kept for days. It is then in a fermented condition, unwholesome and liable to bring on diarrhosa, the general precursor of cholera. The tanks also in the town of Poori are all extremely holy and extremely filthy. It is the duty of every pilgrim to drink out of all these sacred tanks, and it is the custom of many of them to defile the tanks either with forces or urine before they drink. The cholera poison is thus easily spread among a large number of people in a poor state of health, and very susceptible to the attacks of any infectious disease. The permanent inhabitants of the town draw their drinking-water as a rule from public or private wells, and do not suffer much from cholera. January, February, August, September, and October give a total number of nine deaths only. These are the months during which only very few pilgrims visit Poori. In short, the chief causes of cholera in Poori are fatigue after long journeys, unsuitable or unwholesome food (both these predisposing causes prepare the subject and render him susceptible to the action of the cholera poison), and active cholera germs communicated by tank water. If the pandais were only amenable to the elementary forms of reason, or if the Municipal Commissioners would display a little more firmness and desire to improve the health of their fellow-townspeople, much might be done to reduce this source of danger. A mandate in the name of Jagarnath would stop the people from drinking indiscriminately from all the tanks, and one tank might be set apart and used only for drink-For a time the Municipality, acting on my advice, forbade bathing in a certain ing purposes. selected tank, but they did not remain firm, and gave way to popular opinion which seemed to be in favour of making this tank as dirty as all the rest. Until the people learn or are forcibly taught (by means of section 277 of the Indian Penal Code) that water used for drinking purposes must not be defiled, so long will it be impossible to check the prevalence of cholera during the religious festivals in Poori.

Regarding an epidemic outbreak of cholera in a village situated in the port of Poori, Dr. Walsh says:-

"I cannot with certainty give the origin of this outbreak, but will offer one or two suggestions. The well may have been polluted, but as all the people of the village drink from it and only the minority were attacked, perhaps the water was not to blame. The well was, however, closed for a time. I think the cause lay more probably in some of the food eaten by the Nulliahs. They are in the habit of spreading fish on the ground to dry, and the ground on which the fish is laid out is often very dirty, being close to the village. It may be that some of the cholera poison stuck to some of this ill-smelling dried fish."

Almost every district medical officer appears to have paid much attention to cholera. In many cases at great Etiology of Cholera and extracts from Civil Surgeons' reports on the personal inconvenience and risk to themselves they subject. visited the places where it prevailed most severely, and advised the local authorities as to the best means of preventing its spread. Their reports do not, however, cast any new light on the etiology of the disease. The well known predisposing causes, viz., polluted water, local insanitary conditions, imperfect drainage, errors of diet, and importation, are indicated as exciting and favouring, if not absolutely of originating, this disease; but as usual the evidence is in the main confirmatory of the view that outbreaks of cholera are traceable to pollution of drinking water, and this is clearly shown in the special report I submitted to Government during the year on the severe

outbreak of cholera in the Darjiling hills. A copy of that report will be found in Appendix IV of this Report. It would take up too much space were I to reproduce what each Civil Surgeon has to say about cholera, but the following extracts from some of the best reports on the subject may be of interest to Government and the public.

Extracts from some of the most interesting reports regarding the cause and prevalence of Cholera.

Dr. R. L. Dutt, Civil Surgeon of Midnapore, says:-

"All the places forming the routes of pilgrimage to Juggernath, such as Garbeta, Naraingurh in sudder, and Tamlook in the Tamlook subdivision, suffered more from cholera than other places as in the preceding year."

Dr. Barker, Civil Surgeon of Serampore, in which place cholera usually prevails with great severity, writes as follows:—

"Cholera was prevalent throughout the year, and though spread over a wide area did not assume an epidemic form until the beginning of November. The disease may be said to be endemic in this district. I have reason to believe that symptoms similar to cholera, that is, vomiting and purging, but in reality indigestion, or more correctly poisoning, are often the result of eating unwholesome food, particularly fish in a state of decomposition. The people from the North-Western Provinces, of whom there are many (over ten thousand) here working in the jute mills, are particularly liable to this form of indigestion, and the disease is called 'cholera' by the quacks and treated with astringents, and many cases consequently terminate fatally, and are treated in the death register under the head of cholera. I have again to note that the Mohesh and Rishra cooly bustees have been comparatively free from cholera. Only two cases in the first and nine in the lastnamed locality were registered during the year. I repeat I consider the comparative immunity these bustees have enjoyed from this fell disease during the past four years is mainly attributable to the good water supplied to the coolies by the Managers of the Hastings and Wellington Jute Mills aided by the improved sanitation of the bustees."

Dr. Edwards, the Civil Surgeon of Nuddea, in writing of the increase of cholera mortality in Nuddea in 1889 as compared with 1888, says:—

"This I think may be accounted for by the rainfall (which was less in 1889 than in 1888), and so it will continue to be as long as the inhabitants of the district are as careless of their water-supply as they are at present. It is worthy of note that this year the urban population suffered much less than the rural from this disease, the opposite being the case in the two previous years."

And, again, in another paragraph of his report, Dr. Edwards says:-

"The small rainfall in It laink, account for the increase of cholera. It always seems to be the case, and this year is no exception."

Dr. K. D. Ghose, Civil Surgeon of Khulna, makes the following remarks regarding the prevalance of cholera in that district:—

"While this disease prevails epidemically in certain spots, it has a curious seasonal prevalence which I have marked year after year in this district. It has two seasons of extreme prevalence, viz., in December and January, and again in March and April. These two seasons of extreme prevalence would have been a continuous one if it were not for a distinct and invariable lull; in February."

Dr. E. G. Russell, writing of cholera in the Rajshahye district, which was less severe in 1889 than in 1888, says:—

"In 1888 cholera broke out among the pilgrims at the Khetoor mela (14 miles west of Rampore Bauleah) during the last days of October, and spread in an epidemic form along the lines of their returning routes. In 1889 good sanitary and precautionary arrangements were made, and no cholera occurred among the pilgrims at the fair, and none along the line of their return march. The lines of march were laid down and insisted on, the camping site was cleaned, jungle cleared, trees lopped, certain tanks set saide (under police guard) for drinking purposes, and certain others for bathing, latrines were constructed, and a staff of sweepers entertained."

Dr. W. F. Murray of Chittagong makes the following remarks with regard to cholera in the town of Chittagong, which was the cause of 11 deaths in the jail:—

"It would appear, as far as can be ascertained, that it was brought down by some imported coolies from Rangamati. These coolies were living on the banks of the

tank at Ricket's Ghât, and there three of them died of cholers. It has been averred, and it is not unreasonable to believe, that the clothes of these coolies were washed in the tank which supplies with water for culinary purposes the Ander kila part of the town, and which for some time past has also supplied the jail. The chief measure adopted to check the disease, and which has been successful, was to guard the water of the tank from pollution and to reserve it for drinking only."

Dr. Macrae, the Civil Surgeon of Shahabad, makes the following remarks regarding cholera in his district:—

"The general history of the disease for the year is much more unsatisfactory than that of the preceding year " The first portion of the district usually attacked is Sasseram, which is invariably the 'fous et erigo' of all kinds of disease " Quises of outbreaks abound in every village and bustee in the district, and they have been repeatedly pointed out. Local insanitary causes exist in the shape of defective drainage, &c., but there are many common to all parts, such as foul wells and foul tanks, absence of any attention to conservancy, damp and unwholesome and ill-ventilated dwellings, defective and very scenty clothing, and many others too numerous to mention. A visit of inspection to an ordinary native village nearly always gives rise to the reflection, 'How is it possible for human beings to exist at all under such conditions?' It must be because they have in the course of ages acquired a tolerance to surroundings which would mean destruction to persons more happily circumstanced. While general insanitary conditions remain from year to year much the same, it is difficult to account for the disease committing greater ravages during one year than another. Different climatic conditions and their consequent effect on the population, rendering them less able to resist disease, may partly account for this. While the disease was more general this year, certain parts, notably the town of Arrah, enjoyed an unusual immunity. There is no record of any year during which so few deaths took place. There were only '46 per 1,000 recorded. As I previously stated, a large share of this result must be credited to improvements in sanitation. Some tanks have been cleaned and drains also; wells have been put in better order, and provided with spill-drains, platforms, ring walls, &c., and more attention has been paid to conservancy."

Dr. Rigby, the Civil Medical Officer of the Sonthal Pergunnahs, in describing the history of cholera in that district, which was about six times more severe in 1889 than in 1888, the number of registered deaths being 3,571 against 589, says:—

"The outbreak in Dumka was caused by the very filthy condition of the tanks from which the natives draw drinking-water and water for culinary purposes. On inspection they revealed a disgusting state of things, the water being covered by vegetation, slimy and emitting a very bad odour, the banks being used for defectating on and the water polluted also by cattle. There is an adequate water-supply to the town, but with the native indolence they preferred drawing this filthy water to travelling a short distance to tanks reserved for this purpose, or public wells in the town. The epidemic in Shahebganj was due to the influx of strangers from the Purneah district, where the disease was very prevalent, and several cases were directly traced to some members of a party attending a funeral or wedding who used some foul stagnant water in the preparation of their sweetmeats: these all died. I cannot get any satisfactory cause as to the outbreak in Godda, where the largest number of deaths occurred, but the following extract from a letter from the Revd. A. Stark, Church Missionary Society, will explain the severity and duration of the epidemic when started. Mr. Stark says:—'This is what I saw. Corpses were buried scarcely a cubit deep. They were pulled out by dogs and jackals and left exposed to the hot sun, polluting the air and spreading disease. Bones, &c., still lie about. The people know nothing as to disposing—of the motions, &c., which are thrown about around their houses and washed into wells and ponds by the rain.'"

As regards the existence of cholera in the interior of the district, Dr. Rigby 'says:—

"The sources of drinking-water are very limited, and no doubt this has been the cause of the severe outbreak of the disease, the water in most of the tanks being foul to the last degree, saturated with filth from cattle and the drainings from the banks, which are used as latrines and for urinating, and the water used for washing clothes and cattle as well as for culinary and drinking purposes."

Dr. Zorab, the Civil Surgeon of Balasore, where there was a large increase of cholera in 1889 as compared with the previous year, says:—

"Chief among the causes ranks the bad and scanty water-supply of the district. Any delay in the rainfall induces the greatest distress, and there was grave danger of a water famine entertained both in town and in several parts of the district. There should be no delay; the water-supply question should be taken up than by than and village by village, and, wherever practicable, an adequate supply be provided for. It is distressing to reflect that in many parts of the district the people have to undertake journeys of three and more miles to obtain a gaurrah full of potable water."

27. The following tables contain detailed statistical information, district by

Detailed statistical information regarding the Cholers of 1889 as compared with 1888 and the five years 1884 -88.

district, regarding the cholera of 1889 as compared with that of 1888 and the average of the five years 1884—88. The tables also show the months of greatest prevalence in each district, and the

areas which suffered most from the disease in 1889:-

Burdwan Division. -(Population 7,393,954.)

Dramatore	. 45 45	D.	tio per 1,6 population	Rat	of deaths Cholers in	or decrease	Percentages of Villages attacked with Cholera in—			of Villages ttacked with	
Districts.	1884—63. Increase as cont 1868. Increase as cont 1869—9	1 T	1886.	1859.	Number from 1869.	Increase as comp 1888.	1888.	1886		Districts.	
Burdwan Bankura Birbhum	1.87 1.89 I .60 I .67 I February 1.52 28 I .01 I January ber	1.97	1.07 -98 -32 1.25	2:46 1:58 2:03 1:58	3,430 1,647 1,603 3,871	8:59 J :21 J 4:78 J 1:90 J	5·81 4·56 2·32 5·57	23.90 4.77 7.05 7.47	•••	Bankura Birbhum	
Hughli Serampore	1.78 18 D 30 I January, October	1.78	1.36 2.51	-77 2:08	511 735	6.92 D 2.38 D	16.78 15.25	9·81 12·87			
Total	1.39 S7 D 17 D April to December	1.39	1.20	1.55	1,246	5.86 D	16.22	10.86		Total	
Howrah	2.33 65 D 08 D January and Dec		2.93	2.58	1,454	7·55 D	26.23	18:98		Howrah	
Total	1-54 52 I 25 I January cember.	1.24	1.37	1.49	13,256	1.62 I	6.83	8'54		Total	
Bankura Birbhum Midnapore Hughl Serampore Total	1.87 1.29 1.25 2.33 2.5	1.87 - 91 1.97 1.97 1.62 f 1.18 1.78 1.59	1.07 -98 -39 1.25 1.26 2.21 -1.59	2:46 1:58 2:03 1:53 -77 2:08 1:22	3,430 1,647 1,664 3,671 511 735 1,246	Date Date		23-90 4-77 7-05 7-47 9-81 12-87 10-86		Burdwan Bankura Birbhum Midnapore Hughl Serampore Total	

The areas which suffered most in 1839 were—It. Surdwan, Raniganj T. (1232); Cutwa R. (935); Mongolkote E. (610); Katugram E. (803); Shahebganj E. (395); Budwan T. (272); Ausgram E. (245), and Montessur E. (841). In Bankura, Sonamukhi T. (579); Bankura T. (441); Simispal E. (143); Gongajolghan E. (241), and Bissenpur T. (217). In Birbhum, Sakulipur E. (1431) and Bolpur E. (243). In Birbhum, Sakulipur E. (1431) and Bolpur E. (243). In Birbhum, Bakulipur E. (1431) and Bolpur E. (243). In Birbhum, Bakulipur E. (1431) and Gulput E. (243). In Birbhum, Bakulipur E. (1431) and Gulput E. (243). In Birbhum, Bakulipur E. (1431) and Gulput E. (243). In Birbhum, Bakulipur E. (1431) and Gulput E. (243). In Birbhum, Bakulipur E. (1431) and Gurput E. (245), and Gurput E. (1431) and Gurput E. (1431). In Birbhum, Bakulipur E. (1431) and Gurput E. (1431), and Gurput E. (1431). In Birbhum, Bakulipur E. (1431), and Gurput E. (1431)

PRESIDENCY DIVISION.—(Population 7,575,196.)

DISTRICTS.	of Vi	entages llages ed with ra in—	e or decrease apared with	of deaths Cholera in	Rat	io per 1.0 pulatio	000 of n.	or decrease pared with	or decrease pared with	Months of greatest prevalence.
2101 110101	1889.	1889.	Increase comp 1858.	Number from (1889,	1889.	1888.	1884-88.	Increase or dec as compared 1898,	Increase or as compas 1894—88.	
24-Pergunnahs	13.40	16.45	8.03 D	2,978	1.77	3.91	2.67	2°14 D	'90 D	January to June and Decem-
Nuddea	23.36	19.60	3·76 I	8,617	5.18	1.20	3 ·50	'59 I	1.33 D	
Jessore	18:07	20.21	2.04 D	4,509	2:32	2.63	2.87	·31 D	•55 D	January, March to June, Nov-
Murshedabad Khuina	19.54 25.86	#108 25177	12.56 I '41 D	4,558 2,912	5.71 2.72	1°06 3°57	2·14 2·40	2:65 I :85 D	1.57 I .32 I	January to August. January to July and December.
Total	19.08	17:65	A ME K	14,4814	2.45	2-60	2'78	°15 D	'88 <i>D</i>	January to July, November and December.

The areas which suffered most in 1889 were—In 24-Pergunnahs, Canning E. (7.34); Baranarore T. (6.53); Husnahad E. (5.54); Nainatti T. (4.45); Nawabganj T. (3.77); Barripore E. (2.54); Harwa E. (2.53); Dum-Dum R. (2.50) and Rajpore T. (2.36). In Suddea, Nakasipara E. (7.52); Kaliganj E. (5.27); Kustia T. (4.11); Teinatta E. (3.80); Kurimpore E. (3.55); Dowlatpur E. (3.43); Bhadulia E. (3.34); Kishnagore E. (3.03); Nowpara E. (2.83) and Nobodip or Nuddea T. (2.63). In Jessore, Hurinskundo E. (6.80); Lehagara E. (4.79); Narail E. (4.18); Mahamadpur E. (3.39); Magoora E. (3.37); Kalia E. (3.26); Sarsta E. (2.78); Monirampur E. (2.57); Bagerpara E. (2.36); Jhouidsh E. (2.18), and Salika E. (2.00). In Murshedabad, Bhagwangola E. (4.78); Jungipur T. (6.47); Dewansarai E. (6.41); Bharatpur E. (5.86); Gorabazar E. (6.46); Shamserganj E. (5.22); City Murshedabad T. (5.76); Burwan E. (5.00); Borhampur T. (4.61); Roghunathganj R. (4.13); Suti E. (3.96); Sagordighi E. (4.44); Khurgaon E. (3.78); Kandi T. (3.09); Kandi E. (2.79); Assanpur E. (2.32); Miraspur E. (2.24); Dowlatbusar E. (2.23); Burwa E. (2.10), and Jellinghi E. (2.08). In Khullas T. (9.37); Dumuria E. (4.39); Kangi E. (2.38); Kalaroonh E. (2.71); Bagirhat E. (2.68); Pakgaoha E. (2.32); Assanuni E. (2.23); Satkhira T. (2.26); Chulna E. (2.26), and Satkhira E. (2.23).

RAJSHAHYE DIVISION.—(Population 7,735,069.)

Districts.	of Vil	wreentages (Villages acked with lolera in—		of deaths Cholera in	Ratio	o per 1,00 opulation	00 of	or decrease spared with	or decrease bared with	Months of greatest prevalence.
	1889:	1898.	Increase (ns company)	Number from (1689,		1888.	1884-88.	Increase as com 1888.	Increase of as compared 1864—88.	
Dinajpur Rajshahye Rungpore Bogra Pubna Darjiling Julpaiguri	1'89 5'48 1'57 1'79 6'63 8'63 11'58	9:35 7:18 8:84 8:49 6:81 8:74 4:46	1:05 D 1:05 D 1:27 D -8: D -28 D 4:80 I 7:08 I	491 1,179 717 175 768 491 1,189	*8\$ *8\$ *84 *28 *56 8*15 2*04	*88 1*49 *66 *53 *72 1*30 *58	*66 2*67 1*63 1*62* 1*67 *64 1*16	10 I 60 D. 84 D 30 D 14 D 1 85 I 1 46 I	*1.09 D	April and May, January, April, May and De- comber, March and April, Bilght. April and Documber. Mayoh to August. March to July.
Total	3.23	3.76	*23 D	5,010	*64	*78	1.85	-16 D	'91 D	April and May.

The areas which suffered most in 1889 were—In Dinajpur, Pursha E. (2*8). In Bajahanya, Rampore Bosulcan T. (4*8) and Godagari E. (2*8). In Eungpore, Runspore T. (8*3). In Pubma, Pubma T. (3*6). In Daristing, Karsaong E. (5*19) and Phanadewa E. (3*04). In Julpaiguri, Salisani E. (7*20); Katranti E. (6*90); Mynagori E. (3*70); Julpaiguri, T. (3*30), and Silliguri E. (3*37).

湖境 记。

DACCA DIVISION.—(Population 8,705,916.)

Districts.	of V	entages illages ed with ra in—	or decrease	of deaths Cholera in	Rat	io per 1.0 opulatio	90 of n.	or decrease	or decrease pared with	Months of greatest prevalence.
•	1889.	1888.	Increase can sa com 1886.	Number from 1869.	1889.	1,888.	18 64 - 8 6.	Increase or se compe 1886.	Increase or se compa	
Dacos Faridpore	00.04	15.08 16.57	1.35 I 3.66 I	4,899 6,469	3.86 3.81	1.70	2:41 3:38	1.35 I 2.28 I	• '10 <i>U</i> '58 <i>I</i>	January to May and December. January to May, November and December.
Backerganj	. 37.31	82.17	5°14 T	10,416	5-47	4.18	8:42	1.85 Z	2.05 I	January to June and Decem-
Mymensing	3.52	5.71	8.46 D	4,777	1.28	1.74	1.84	'18 D	·28 D	ber. April to June and December.
Total	13'27	15.91	.86 I	26,561	8.02	2.06	2.91	*89 I	.44.I	January to June and December.

The areas which suffered most in 1889 were—In Dacca, Narainganj T. (9°63); Moonshiganj E. (5°09); Narainganj E. (4°33); tapganj E. (3°86); Dacca T. (2°59); Raipura E. (2°33), and Dacca E. (2°07). In Paridpore, Bhusna E. (6°65); Polong E. (6°02); Iaksudpur E. (5°67); Bhanca E. (5°16); Awanpore E. (8°63); Sibchar E. (3°29); Beliakandi E. (3°15); Gopalganj E. (2°99); Iaksudpur E. (2°70), and Katalipara E. (1°20). In Backerganj, Golachipa E. (18°17); Gulshakali E. (10°90); attakhali E. (8°18); Barisal E. (1°19); Barisal E. (5°18); Matharia E. (1°078); Burhanudia E. (6°48); Bowial E. (5°83); Backeranj E. (5°26); Barisal T. (4°85); Bhola E. (4°62); Bhandaria E. (1°14); Jhalskati E. (2°58); Nalchtiti E. (2°35), and Gournadi E. (3°30). In Hymensing, Nasirabad E. (3°17); Bazitpore E. (2°172); Kishoreganj E. (2°68); Gaffergaon E. (2°34); Nikli E. (2°35), and

CHITTAGONG DIVISION. - (Population 3,467,474.)

Districts.	of Vi	ntages llages ad with rain—	or decrease pared with	of deaths Cholers in		o per 1,0 opulation		or decrease pared with	or decrease pared with	Months of greatest prevalence.
	1889.		Increase as com 1888.	Number from (1889.	1889.	1889.	1884—88.	Increase or as compa 1588.	Increase or as compa 1884—88.	
Chittagong Noakhali Tipperah	6:54 12:36 11:35	26°11 7°00 6°27	19.57 D 5.36 I 5.08 I	306 1,691 4,024	.34 2.04 2.65	2*80 *67 *92	1·24 ·96 1·76	1:96 D 1:39 I 1:78 I	'90 <i>D</i> 1'10 <i>I</i> '80 <i>I</i>	Slight. March to July and December. January to June and December.
Total	10.97	8.08	1.89 I	6,111	1.76	1:31	1.40	'45 £	'86 Z	Ditto ditto.

The sress which suffered most in 1839 were—In Noakhali, Lakshimpur R. (4°64); Hathia R. (3°72); Sudharam R. (2°86), and Ramganj E. (*3°0). In Tipperah, Chandpur R. (6°01); Comillah T. (3°92); Laksham R. (3°07); Moradnagar R. (2°61); Jogunnsthdushi E. (2°54); Brahmanberia R. (2°47); Daudkandi E. (2°48), and Brahmanberia T. (2°28).

PATNA DIVISION.—(Population 15,063,944.)

						<u> </u>				
DISTRICTS.	of Vi	ntages liages ed with rain—	or deorease pared with	of deaths Cholera in		o per 1,0 opulatio		or decrease pared with	or decrease	Months of greatest prevalence.
•	1889.	1888.	Incresse of as compa 1868.	Number from (1869.	1889.	1898.	1884—88.	Increase as comi 1888.	Incresse of as comps 1584—88.	•
Patna Gya Gya Shababad Mosufferpore Durbhanga Sarun Chumparun	6.72 6.82 5.18 6.91 3.05 5.19 1.23	6.75 2.60 2.11 11.61 7.87 6.40 9.87	**************************************	1,821 3,429 4,080 3,684 3,541 1,756 740	1.03 1.61 2.07 1.42 1.31 76 .48	1'19 1'00 '9\$ 1'63 1'84 1'01 6'62	1.88 2.79 2.87 2.04 1.57 1.58 3.81	16 D 101 I 115 I 23 D 50 D 25 D 620 D	279 D 1711 D 180 D 180 D 183 D 183 D 1:01 D	June to September. June to October. July to November. Ditto ditto. Ditto ditto. July to October. May, September and October.
Total	5.00	6.02	1'90 D	19,049	1.20	1.92	2.87	-60 D	LOI D	July to October.

Sas which suffered most in 1889 were—In Patna, Dinapors R. (12.73); Barrh T. (3.85); Manar R. (3.50), and Patna T. (5.94); Nobinagar R. (5.23); Arungabad R. (3.06); Bajowli E. (2.53), and Arwal R. (2.14). In Shahabad R. (6.02); Buxar T. (5.94); Dehree R. (4.09); Sasseram R. (5.03), Dumrson T. (2.91); Buxar R. (2.09), and Bhabua R. (5.08) arpore, Sitamarhi T. (4.03); Pupree R. (3.22); Sitmarhi E. (5.10); Katra R. (2.25), and Lalganj T. (2.08). In Durbhastan T. (5.71); Durbhanga R. (3.21); Beniputy R. (2.29), and Madhubani R. (3.22). In Sarun, Revilganj T. (5.06).

BHAGULPORE DIVISION.—Population (8,063,160.)

Districts.	of Vil	contages oked with here in—		of deaths holers in	Rati po	o per 1,0 opulation	00 of	or decrease	or dacrease ared with	Months of greatest prevalence.
,	.0694	1586.	Increase as com 1898.	Number of from Chols 1869.	1889.		1864-86.	Increase as comp 1668.	Incress of a comparation of 1884—88.	,
Monghyr Bhagulpare	8°17 9°77 38°97	8'00 5'64 3'87	*08 I *13 I \$5:50 I	2.045 8,095 17,750	1*05 1*57 9*40	1·17 '78	1.78 1.83	'14 D '85 I	'78 D '04 I 8'71 I	June to October. April, May, July, August and October. March to May and November.
Maidah Sonthai Pergunnaha	8°57 5'08	17:17	8.00 D	3,581	1°52 2°27	4°47 '87	1.19	1.80 I	1.08 I	April to June, August and December. April to Reptember.
Total	8.88	5.09	4.88 L	27,541	8'41	1.04	1747	837 I	1.94 7	March to October,

ORISSA DIVISION.—Population (3,628,832.)

		Percen of Vil attacks Uholes	leges d with	or decrease pared with	of deaths Cholers in	Rati	o pef 1.0 opulatio	000 of n.	or decrease	or decrese parad with 8.	Months of greatest prevalence.
Districts.	•	1889.	1868.	Increase of an comp. 1888.	Number from Cl 1889.	1889.	1888.	1884-88.	Increase as cond 1888.	Increuse on as compa 1884—88.	
Cuttack Poori Balasore	•••	27*99 58*67 85*99	11.81 12.85 10.30	16·18 I 45·82 I 25·69 I	14,687 18,669 12,993	8·29 21·01 13·74	2·12 2·39 1·97	3·7 2 5·18 4·51	6·17 I 18·6± I 11·77 I	4·57°I 15·83 I 9·23 I	April to December. March to December. January to August, November and December.
Total		87:68	11.61	26·07 I	46,549	12.82	2.12	4.58	19·67 I	8·54 <i>T</i>	March to December.

The areas which suffered most in 1889 were—In Outtack, Banki E. (22'19); Aul R. (12'35); Cuttack R. (11'96); Jajipore T. (8'99); Dharmasala E. (8'90); Kendrapara E. (8'73); Tirtolah E. (\$5'10); Patamundi R. (6'99); Jajpur E. (6'22); Salipure E. (5'98); Kendrapara T. (4'71); Cuttack T. (4'50), and Jugutsingpur E. (36'4). In Poori, Banapur E. (6'4'90); Khurda E. (38'80); Kendrapara T. (4'71); Cuttack T. (4'50), and Jugutsingpur E. (6'30). In Balasore, Basudebpore E. (25'91); Chandbali E. (23'91); Poori T. (23'76); Poori E. (20'36); Piplee E. (13'27); Dhamnagar E. (11'84); Boro E. (11'08); Busta E. (10'91); Balasore T. (10'46); Balispal E. (10'40), and Jellasore E. (6'04).

CHOTA NAGPORE DIVISION.—Population (4,225,989.)

DISTRICTS.	of Vi attack	entages illages ted with ora in —	or decrease ared with	Cholera En	Rat	tio per 1, populatio	000 of n.	or decresse pared with	or decrease pared with	Months of greatest previlence.
2142	1889.	1988.	Increase or decrase compared v	Number from C 18v9.	1889.	1888.	1884—88.	Increase or ns compar 1889.	Increase or sa compa 1884 - 86.	
Hazaribagh Lohardugga Singbhum Manbhum	1°20 5°68 4°92 4°64	2·71 1·17 6·24 12·06	1·51 D 4·51 I 1·32 D 7·42 D	790 5,213 509 1,915	*71 8*23 1*13 1*80	1-80 •65 1-17 4-13	1 44 1 55 50 1 57	1:09 D 2:38 I :05 D 2:38 D	'78 D 1'68 I '62 I '23 I	June and August. June to September. May and July to September. April to August.
Total	8.88	4:95	1.08 D	8,427	1.55	1.88	1.41	·11 I	*58 <i>T</i>	May to September.

The areas which suffered most in 1899, were—In Hassribagh, Ramshur R. (2.08) and Hazaribagh T. (2.35). In Lohardugga, Ranchi T. (12.52); Ranchi R. (10.72); Mandar R. (10.04); Karra R. (9.63); Sasai R. (8.31); Lohardugga R. (3.66); Mohowadand R. (2.52); Lateshur R. (2.44); Chainnur R. (2.34); Balumst R. (2.33), and Khuntee R. (2.07). In Singbhum, Chuckradharpur R. (3.35). In Manbhum, Purella T. (2.46); Chass R. (3.27); and Roghunathpur R. (2.06).

PORT OF CALCUTTA.

into I of Eu	dission Hospital Propess Per in—	amo	eaths og this oer in—	per l Popu	tio of maths i,400 of alation		Aver	age str Ses	ength men i	of Eur	opean	W. 1517_TV		Rat	io of D Popu	eaths plation	per 1,00 in-	00 of .	
1889,	1888,	1889.	1888.	18	1888.	1889.	1888.	1887.	1886.	1986.	1884	1883.	1689.	1888.	1887.	1896.	1886,	1884	. "5882
33	26	18*	16	11.07	10.20	1,626	1,510	1,893	2,326	1,698	1,684	1,880	11.07	10.28	10.08	11-17	4'18	81-3	19-8

Among the native floating population there were 80 deaths in 1889, against 35 in 1888, giving death-rates of 3°12 and 8°70 respectively of estimated population.

28. The incidence of cholera at fairs and festivals was slight during the year under review except in Poori, where there was a large increase of cholera among persons and pilgrims attending the religious festivals in that Civil Surgeon's report quoted in paragraph 25, I need not say anything further, on the subject in this paragraph.

SMALL-POX.

29. The table in the margin shows the number of deaths from small-Prevalence of Small-pox in the Province and seasonal incidence pox during the year under of the disease.

		Number	Ratio	Percentages	NUME CIRCI	ER OF
Period •	l .	of deaths.	1,000 of popu- lesion.	of Villages attacked by Small-pox.	Affected more or le-s severely.	From which Small-pox was absent.
1989		8,665	.12	1.98	18	326
1848	•••	6,247	.09	1.18	7	878
18×7	•••	8,846	*05	190	4	877
1986		4,049	106	. 97	5 18	859
1685		9,863	'14	2.42	18	272
1884		18,583	'28	2.84	53	£24
1883	•••	9,714	111	1.73	80	284
1982	***	13,651	.50	2 87	38	. 280
1981	•••	24,871	'36	4'37	48	218
1880		24,933	'84	4.86	54	241
• 1879	•••	22,848	'84	4 08	₹7	171
Mean of the	lecade					
1879-1888	***	13,607	1 20	2.64	32	280

pox during the year under review and in each of the The ratios past ten years. of deaths per 1,000 of the population, the percentage of villages attacked, the number of circles affected more or less in each year, and the number of circles from which the disease was absent altogether, is also given. It will be seen that the number of deaths during 1889 and the death-rate of that year were considerably higher than in 1888, but less than the average of the

ten-years period 1879—1888

30. The seasonal incidence of small-pox during 1889 was as follows:—

,	Mostus.		Deaths from Small-pox.	Ratio per mille.	м	ONTH	3. 	Deaths from Small-pox.	Ratio per mille.
January February March April May June		 •••	596 831 981 1,470 1,245 958	*009 *01 *01 *02 *01 *01	July August September October November December	•••	•••	 766 976 613 162 196 471	*01 *005 *009 *003 *003 *003

As usual, the highest mortality occurred from the end of February to the end of July.

31. The comparative mortality from small-pox in urban and rural areas

Comparative mortality in Urban and Rural Circles.

	DEATH	e prom Pox in-	SMALL.	RATIO PO	PER 1	000 OF	decrease ed with	decrevae ed with
Circles.	1889.	1889.	Quinquenniun 1884 –89,	1849.	1688.	1884 – 89.	Increase or case of the second	Increase or case or compare 1884-85.
Urban Circle Rural	653 8,012	\$90 5,857	812 7,626	·29 ·12	.16	.87 .11	·13 I	.08 D

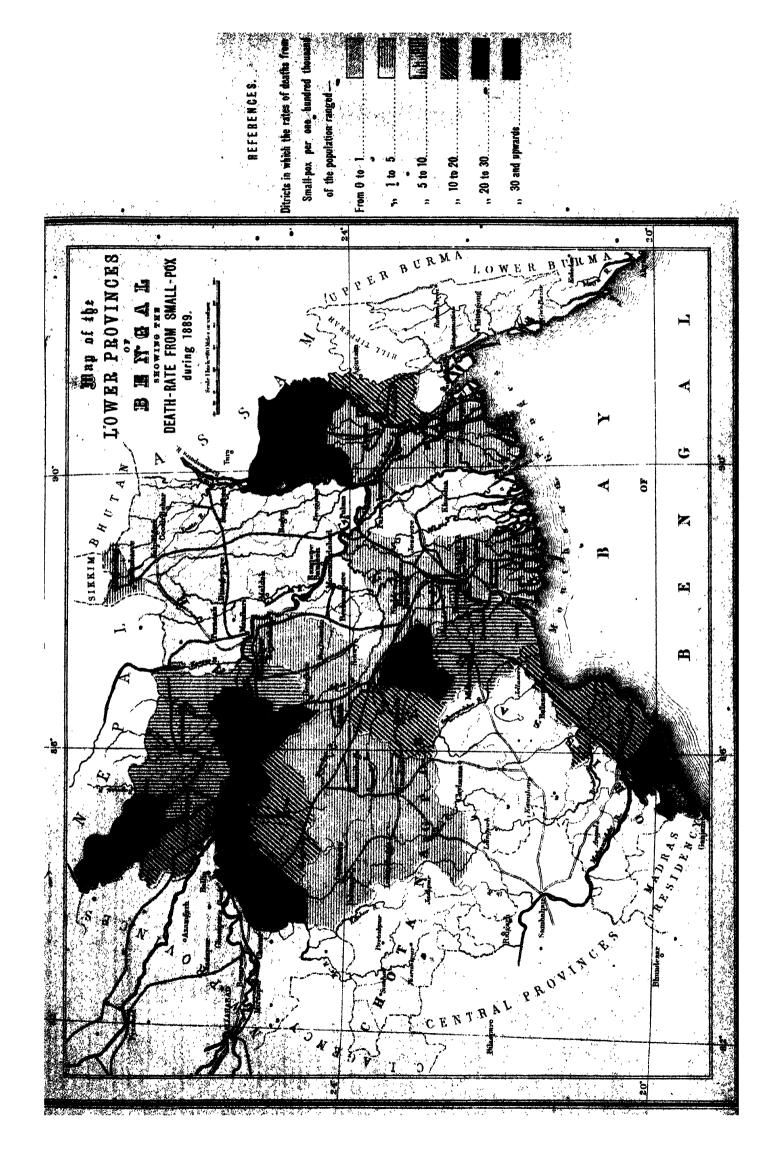
is shown in the margin. Both areas, towns especially, suffered more in 1889 than in 1888. The death rate in towns was very much higher in 1889 than it was in 1888, and more than twice as high as the rate in rural areas. The high rate in towns is undoubtedly to be attributed to neglect of vaccination,

which is not creditable to Municipal Commissioners. The towns which suffered most from the disease were:—Bankura (4.80), Poori (2.25), Bissenpore (1.80), Cuttack (1.04), Purulia (.85), Lalganj (.83), Chupra (.81), Patna (.71), Dumraon (.67), South Suburban (.54), Dinapore (.53), Revilganj (.48), and Buxar (.45).

Diagram and man showing the incidence of Small-pox in the pox mortality in the Province during the year under review.

Diagram showing the death-rates from SMALL-POX per one hundred thousand of population during the year 1889.

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Ratio of deaths from Small-pox por 100,000 of opulation per annum.	Burdwan.	Bankura.	Birbhum.	Widmenore	Midimulation c.	Huehli.	Seramrore.	Howrah.	24-Pergunnaha.	Nuddes.	Jessore,	Murshedshad.	Khuina.	Dınajpur.	Rajshahre.	Rungpore.	Bogra.	Pubna.	Darjiling.	Julpaiguri.	Dacca.	Faridpore.	Back ermanj.	Mymensing.	Chittagong.	Noakhalt.	Tipperah.	Patne.	Gva.	Shahabad.	Mozaffenpore.	Darbhanga.	estan.	Chumparun.	Monghyt.	Bhagulpore.	Purnesh.	Maldah.	Southal Pergunnahs.	Outtack.	Poori.	Balacore.	Hazaribagh.	Lobel dange.	Sing bhum.	Manbhum.
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33. The disease prevailed with the greatest severity in the districts of Poori, Chumparun, Bankura, Shahabad, Patna, and Mymensing. In Poori the mortality of 1889 was largely in excess of that of 1888. The disease appears to have been imported from outside, the people of Poori being more or less the wictims of an invasion of it from the Khorda subdivision, where the people strongly object to and resist vaccination, and where inoculation is largely practised among the aborigines of the place. As a consequence of this, small-pox is both endemic and epidemic in the greater part of the Khorda subdivision. In Chumparun the small-pox mortality was high because the district had not been protected by vaccination. It is now being protected. It is not clear to what cause the excessive mortality in Bankura is due. The district has not suffered from an epidemic of small-pox for many years. The matter is being enquired into and will be further dealt with in my Triennial Report on Vaccination which is due this year. In Shahabad small-pox was more prevalent and more widely distributed in 1889 than it has been for some years back, but its chief intensity fell upon Sasseram town and thanna. ation has not made much progress, and great opposition was met with, and unfortunately the Municipal Commissioners with their Chairman did not lend the assistance in furthering its advance which they might and should have No explanation is given of the high rate of mortality in Patna. The matter will be enquired into and referred to again in my Triennial Vaccination In Mymensing the excessive mortality from small-pox is to be attributed to the strong prejudices of the people against vaccination, which, however, is being gradually overcome.

Mortality among Infants and Children.

	Deaths.	Proportion per cent. to total mortality.
Under one year One year to six years Six years to twelve years	2,841	22:40 32:78 16:44
Total under twelve years	6,120	70.62

The mortality from small-pox among infants and children is given in the margin, and shows that 70.62 per cent. of the total mortality from this disease in the Province occurred among children under 12 years of age. In 1888 the percentage was 80.82, so that there is an improvement in this respect, although the rate is still very high. The excessive mortality among children is due chiefly to the difficulty experienced in some districts in

* 15.7 (1.75) - 13.85

inducing parents to have their children protected, even in the face of severe epidemics.

In the Port of Calcutta no deaths occurred from small-pox during **35**. 1889 either among European seamen or the native Incidence of Small-pox in the floating population. This makes the ninth year Port of Calcutta. that European seamen in the Port have enjoyed total immunity from the disease, and the fourth year that the native floating population have escaped from it.

FEVER.

36. During the year under review 589,252 males and 512,269 females, or a total of 1,101,521 persons, representing a death-rate of 1672 per 1,000 of the population, were reported to have died from fever, against 1,092,102, or a death-rate of 16:53, in 1888. The increase therefore in 1889 as compared with 1888 amounted to 9,419, or 19 per mille. The mean of the previous ten years is 934,203, which is equivalent to a death-rate of 14:12 per mille. The table

Comparative mortality from Fever in the Urban and Rural circles.

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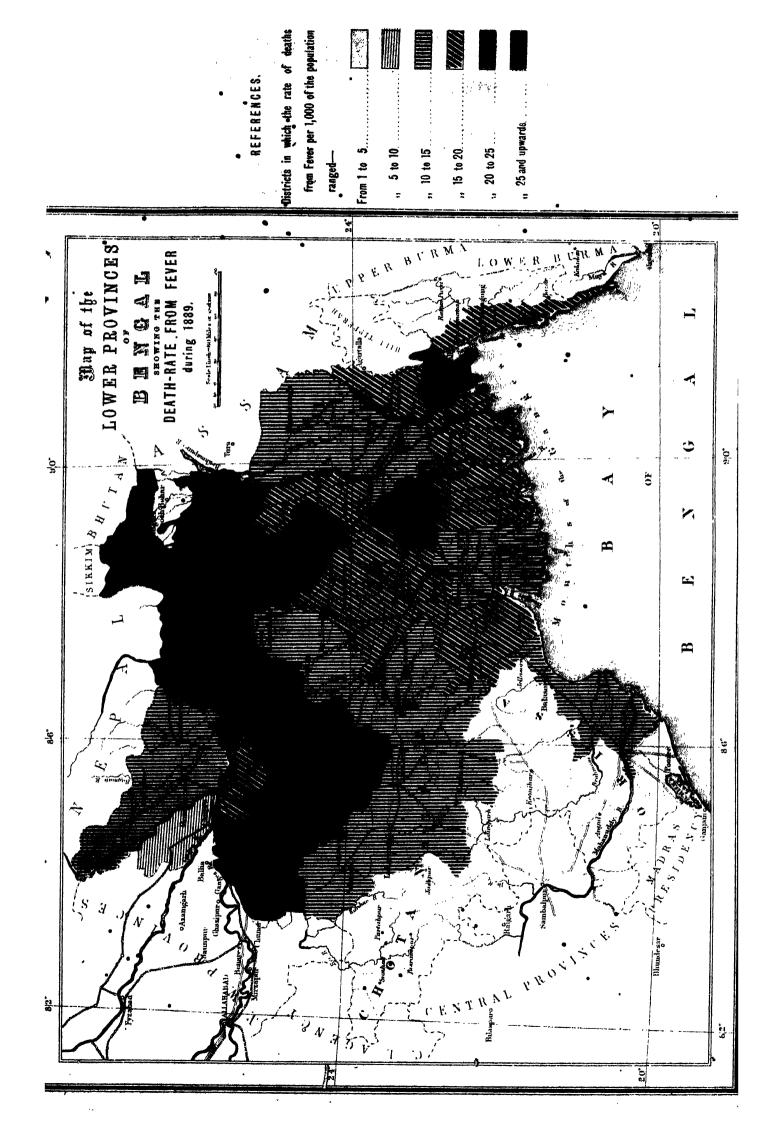
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in the margin compares the mortality from fever in urban and rural circles during 1889, 1888, the five-years period 1884—1888, and the ten-years period 1879—88. It will be seen that,

with the exception of a small increase in towns in 1889 as compared with 1888, due to a smaller urban population in 1889, fever was less prevalent in towns and more prevalent in rural circles during the year under report than in the past periods with which that year is compared. I do not believe there has been such a remarkable change in the incidence of fever in towns as is represented. The low rate of mortality as compared with that in rural circles is, I think, as suggested in the Government Resolution on my Report for 1888, in some measure due to the indiscriminate classification of all diseases with inflammatory symptoms as fever in the more rural and less educated tracts of the country. In the whole of Bengal the number of villages attacked by fever was 159,568, or a percentage of 68.08, in 1889, against 162,650, or a percentage of 69.80, in 1888.

The diagram facing this page shows the mortality from, and the seasonal incidence of, fever in Bengal, together Seasonal incidence of Fever and diagram showing mortality for 16 with the annual rainfall of the Province for the past sixteen years. It will be observed that the number of deaths and the death-rate per 1,000 of the population was higher w in 1889 than in any of the previous fifteen years with which that year is compared, and that, with the exception of one or two years, there has been a steady increase year by year in the number of deaths recorded from fever. is probable that this result is due to improvement in registration and increase in the population rather than to greater unhealthiness of climate. present population of Bengal is estimated at 74,482,274, as explained in paragraph 2 of this Report, the death-rate from fever would be 14.78 per mille and not 16.72, which is calculated on the Census population of 1881, viz., 65,859,534. The seasonal incidence of fever in Bengal is striking. It will be seen from the diagram that the lowest mortality is invariably in the month of June, from which month it gradually rises till it reaches its maximum either in November or December, then it gradually declines till February as a rule, then there is a slight increase in March and April, and then it falls to its minimum in June.



38. The following diagram and the shaded map on the opposite page illustrate the mortality from fever in each district mortality from Fever in 1889 in of the Province during the year under review:—each district of the Province.

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DISTRICTS.	Ratio per	Dietricte.	Ratio per mille.
Julpaiguri Noakhali Dinajpur Monshyr Darjiling Rajshahye Rungpore	29·16 24·77 24·74 24·54 42:25 22·74 22·07	Jessore Gya Maldah Bhagulpore Hazaribagh Purneah Shahabad	21'44 21'81 21'20 20'93" 20'84 20'59 20'45

It will be seen that the death-rate was highest in the fourteen dis-In districts like tricts noted in the margin. Julpaiguri, Noakhali, Dinajpur, Darjiling Terai, Rajshahye, Rungpore, Maldah, and Parneah, which have always been notorious for fever, the high rate of mortality is principally due to the excessive saturation of the soil with moisture, which is caused by the want of

but in such districts as Monghyr, Gya, Bhagulpore, Hazaribagh, and Shahabad, which have hitherto been healthy, an explanation of the high rate of mortality now occurring is not so easily traced. The Civil Surgeons of the districts in question, except the Civil Surgeon of Shahabad, make no remarks in their annual reports which throw any light on the subject. The Civil Surgeon, Shahabad, (Dr. Macrae) says :-

"The general health of the district as a whole during 1889 was decidedly bad, and has been so as a matter of fact for the past five years. Instead of being, as it was once considered, a healthy district, it now takes rank, if statistics are to be at all relied on, as the 5th or 6th unhealthiest in the whole Province, calculating on the average of the last five or six years, and in 1886 it held the unenviable position of first on the list. Fever is as usual responsible for the chief mortality. Epidemics are now of frequent occurrence. Upwards of 90 per cent. of all the villages in the district suffered from the fever epidemics, and in some of the registering circles hardly a village escaped. In fatality from fever Shahabad is worse than the majority of districts in Bengal, and is only exceeded by the districts in the Rajshahye Division. Although there was no startling epidemic like that which prevailed in the last quarter of 1888, still the disease prevailed with much severity and in an epidemic form, and was more generally prevalent throughout the year. The alleged exessive prevalence of fever in the district for the last few years is locally attributed, and not without some show of reason, to the influence of canal irrigation and interference with drainage and water-logging of the soil. I am of opinion that irrigation as carried out has no doubt injuriously affected public health."

The Magistrate of Shahabad, in forwarding the Civil Surgeon's report,

- "I concur generally with the Civil Surgeon's remarks. I am afraid that there is little doubt that the increase of irrigation has unfortunately affected the ordinary health of It however provides an immunity from famines, and thus prevents increased mortality and general deterioration of health from scarcity in years when the rainfall is abnormally low."
- In the Government Resolution on my Report for 1888 it was suggested that the high rate of mortality in Gya, Hazaribagh, Monghyr, and Shahabad "might be found in the existence of a wave of malarious fever creeping gradually westward independently of, though not, of course, uninfluenced by, conditions of surface drainage." I have not been able to discover as yet how far, if at all, this is so; but I must confess that I do not myself incline to this view of the case. I still think that the explanation is rather to be found in stagnation of moisture in the ground due to impeded drainage. There is no doubt that the want of proper drainage of the soil is the principal cause of the great prevalence of malarial fever in Bengal. As a rule, fever is most prevalent in districts where drainage is worst. The notorious Burdwan fever epidemic of 1863—73, which carried off many hundred thousands of people, was due to impeded drainage. The drainage of the district became obstructed by the construction of certain embankments which led to the silting up of its natural and artificial outlets, the result being a water-logged condition of the soil, the development of malaria, and an alarming increase in the death-rate. As soon as steps were taken to remove the obstruction to drainage, the district became somewhat dry, and the result was an amelioration of health. Another cause which led to this happy result is said to have been the admission of the water of the river Damuda into the Kana Nadi and the Kana Damuda and other creeks and channels in the districts of Burdwan and Hughli. It is certainly remarkable that the health of the villages situated on these water-courses since the introduction into them of Damuda water has been much better than that of villages. situated elsewhere in the same district; and as the death-rate from fever in still high in Burdwan and Hughli, I would strongly recommend, as a means

of reducing it further, that as many as possible of the water-courses which are not at present fed by the Damuda should have the water of that river introduced into them, at least during the rains when the river is in flood and contains a large volume of water. I understand that there would be no difficulty, or much expense either, in carrying out this suggestion, as sluice gates already exist in many of the partially silted up water-courses which it is proposed. to flush and feed.

40. The prevalence of malarial fever in Bengal is sometimes attributed to inundations and artificial irrigation. Inunda-Effect of inundations and artificial irrigation. tions, however, are not in themselves hurtful; on the contrary, they are beneficial as a means of flushing. It is only when the surface drainage is obstructed, and the water sinks into and stagnates in the soil, that the locality becomes malarious. As this is an important and interesting question, I give some extracts from the Civil Surgeons' reports on the subject :-

Dr. Mukerjee, the Civil Medical Officer of Bankura, says:-

"" This district is almost unknown to inundation except the southern side of the treacherous river Damuda; but quickly as the water subsides, the overflowing does not appear to affect the health of the people."

Dr. Barker, Civil Surgeon of Serampore, says:—

"There was no inundation. Irrigation as practised here does not appear to be injurious to health, as the growing crops apparently prevent deleterious emanations, and the rapid drying action of the sun soon checks the bad effects of humid vapours."

Dr. Tomes, the Civil Surgeon of Howrah, says:—

"There was again some flooding of the country about Uluberia, but this was not attended with any increase of sickness. In fact, as far as fever is concerned, that circle was the healthiest of the district, the death-rate from fever amounting to 10.1 per 1,000 only."

N.B.—The drainage of Uluberia is comparatively good, and flood water quickly flows off.

Dr. Edwards, Civil Surgeon of Nuddea, says:

"Very little artificial irrigation is carried on in this district. The effects of the inundations this year have as usual been decidedly beneficial. The general health of the district is always improved by heavy floods: they clean the country, wash out the ditches, fertilize the land, and leave behind them a good supply of comparatively clean water."

Assistant Surgeon Khurgeshur Bose, in civil medical charge of Faridpore, savs:-

"During the year 1889 there was general inundation in the district as was the case in "During the year 1889 there was general inundation in the district as was the case in previous years. But the river rose unusually high during the months of July, August, and September, higher even than in 1886, submerging almost the whole of the district. The water of the Pudma pushed up even to the civil station, and there was scarcely any house in the town of Faridpore above flood water. The flood lasted unusually long during the year. The health of the district, however, was not materially affected by the inundation. It washed away much impurities from the district and covered those that were left behind with a layer of new silt, and thus helped in the work of sanitation, but it did material injury to the crops."

Dr. Gilligan, the Civil Surgeon of Durbhanga, says;

"There are no irrigation works in this district. Slight temporary inundations were reported from the north-west of the district, which necessitated the resowing of some rice lands, but otherwise did not do any harm."

Dr. C. M. Russell, Civil Surgeon of Sarun, says:—

"Malarial fever was extremely prevalent owing to the large quantity of stagnant water that flooded the country during the rainy season, and which on its evaporation became a fruitful source of marsh, leaving the low lands swampy and saturated with moisture, and so causing noxious effluvia from fermentation and decomposition of vegetable debris. Malarial fever first, made its appearance in an epidemic form in this district in 1881, and has prevailed in this form with fluctuation ever since. It owes its origin, so doubt, to a combination of causes—(a) to canal irrigation, (b) to the country generally being over-outlivated, so that the natural drainage lines are choked up, (c) to the railway line, the Bengal and North-Western Railway Company having erected a bund right across the district without providing a sufficient number of culverts and waterways, and (d) to the difficulty attending drainage schemes by reason of the general level being below that of the rivers in high flood."

There is no doubt Dr. Russell is perfectly right about sail wave obstructing the natural drainage of the country, and not providing sufficient waterways in their bunds and embankments. I dwelt on the subject at length in my annual report for 1888, and I beg again to draw attention to those remarks. It is the universal cry in Bengal that sufficient waterway is not provided in railway and road embankments.

Dr. Stewart, the Civil Surgeon of Cuttack, says:-

"No unusual inundations took place. During heavy floods the lower parts of the district near the coast are overspread by water which does not seem to affect the health of the inhabitants."

Assistant Surgeon K. C. Dutt, in civil medical charge of Pubna, says:

"The district of Pubna was inundated to a greater extent in 1889 than in 1888. On the whole the effects of inundations appear to have proved beneficial to the health of the people as well as to the winter crops, as it washed away the surface organic and vegetable impurities and deposited silt all over the country."

Mr. Sharp, the Magistrate of Bograf makes the following remarks with reference to the high rate of fever mortality in the west, north-west, and north of Bogra during the year under review:-

"Not only is there more jungle in the west, north-west, and north of the district, but the soil is damper and closer. It is fertile, and produces grass like North Behar. The character of the north-western part of the district (where I am now in camp) resembles that of Rungpur and Dinajpur, the adjoining districts, rather than the drier and sandier parts in the middle and south. It is quite natural that Shariyakandi should be the healthiest thanna. It is well washed every year by floods, which fall in good time.

Assistant Surgeon A. C. Mookerjee, in civil medical charge of Noakhali, says :--

"Malarious fever is an endemic disease in the district on account of the dampness of the sqil. A large portion of the district is annually flooded, and after the rains becomes swampy owing to the low level of the district and want of proper drainage. Fever prevailed to a greater extent than usual both in urban and rural areas. The disease began towards the end of October and continued up to nearly the end of December, when it declined. The untimely rain in October appeared to cause this increase of fever by soaking the ground and keeping it moister much longer than usual."

Chumpuran furnishes a striking proof that inundations in themselves do no harm. The year under report was one of excessive rainfall and unusual floods, and Dr. Boville, the Civil Surgeon, says that "the parts that were flooded are not those in which the highest mortality occurred."

Detailed statistical information regarding the prevalence of Fever in 1889, as compared with 1888 and 18:4-88.

The following tables contain detailed statistical information, district by district, regarding the prevalence of fever in 1889, as compared with 1888 and the average of the five years 1884—88. The figures speak for thomselves:—

Burdwan Division.—(Population 7,393,954.)

	Per of att	centages Villages ected by ver in—	decrease as with 1888.	Deaths	from Fe	ver in —	Rat Po	io per 1,0 pulation	000 of	decrease of compared	decrease of compared 86.	dermase of as ecen-	degraate of
Витисте.	1889.	1889.	Increase or compared w	1989,	1888.	1984-88.	1889.	1868,	1884—68.	Increase or Desides as with 1988.	Deaths as with 1894-	Desth-rates payed with	Increte or Desthersto pared with
Bankura Rirbhum Midnapore Rigahli	85° 63° 77° 69° 89°	0 - 0077 18 74-9 19 68-8 16 93-5	3 2.87 I 4 2.08 I 9 .30 I 2.45 I	22,861 14,501 14,001 41,592 11,514 5,758	22,147 13,748 15,425 43,887 10,781 4,287	28,101 18,281 14,234 88,717 10,508 4,102	16'42 18'91 17'62 16'52 17'86 16'36	15-91 18-19 10-41 17-28 16-18 12-17	16.89 12.74 17.91 15.88 16.84 11.82	714 I 759. I 1,494 D 1,755 D 788 I 1,471 I	240 D 1,220 I 223 D 2,809 I 1,046 I 1,596 I	51 I 72 I 178 D 70 D 118 I 479 I	17 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D
Total .	100	87.6	8 8.81 Z	17,272	15,018	14,670	17'01	1479	14'45	2,254 2	1 200.2	2.84 7	2'50'5
Howrah	84	13 69-1	Q 4.88 D	6,944	6,895	6,118	10198	10%4	9.68	51. ₹	1.000	108 Z	1.80 1
Total .	78	72'0	6 '91 J	117,161	116,509	110,117	15'84	38.76	14'89	500-90	7,000 I	'00 Z	96.7

The areas which suffered most in 1259, were—In Burdwan, Gengoor R. (20-21); Burdwan R. (21-25); Colm Selimabed R. (20-21). In Explainm, resimilar R. (22-25) and Scory R. (20-21). In Explainment, Debri R. (24-25); Rolls R. (22-21), and Dhaniskishi R. (22-25), Harphi R. (22-21).

Presidence Dryreton.--(Population 7,575,196.)

	# #ETTEROT	Diagra Ilagas and by rin-	denomes as with 1888,	Deaths	from Fe	ver in-	Ratio Pos	per 1,0	000 of	decress of companies	COMPANY OF	Company of	1
• Districts.	981	1886.	Increase or compared w	1886.	188	10 ·	1886.	1884	1884-86.	Incress or Deaths as with 1888,	Incress or Deaths so with 1886-	Incress or Death-rates with 1986.	Increse or Vestil-reter with 1966—
24-Pergunnahs Nuddee Jessore Murshedabed Khulns	80°88 98°28 86°55 92°41 80°69 86°06	78*20 84*16 87*49 99*94 76*98	1.48 f 5.07 f 94 D 47.58 D 8.71 f	22,894 25,950 41,590 23,313 19,288 132,985	30,538 37,861 35,310 25,557 20,170 142,436	23,653 38,989 37,950 25,202 19,536 145,312	13.68 15.67 21.44 19.00 17.81	16'88 18'83 18'46 90'83 18'67	14'13 23'58 19'86 30'54 18'60	7,644 D 4,411 D 5,780 I 3,244 D 988 D	750 D 18,019 D 3,640 I 1,880 D 300 D	2*66 D 3*86 D 3*96 I 1*88 D *86 D	1.63 D

The areas which suffered most in 1889 were—In 24-Pergunnahs, Dum-Dum E. (28'34), Cossipore and Chitpore T. (28'87), and Rejpore T. (22'88). In Muddee, Haringhatta E. (22'83) and Chagdah E. (22'00). In Jessore, Gaighatta E. (30'50); Harinakundo E. (22'55), Ragherpara E. (24'55); Salikha E. (24'47); Narail E. (24'10); Jessore E. (28'93); Keshubpore E (22'60); Jienida E. (23'30); Lohagura E. (28'25), Montrampore E (22'01); Jessore T. (24'4); Sharaha E. (31'19); Kaliganj E. (21'16); Bonsong E. (30'35); Kotechandpore E. (20'27), and Magora E. (20'13) In Murshedabad, Shamehergunge E. (29'36); Sagordight E. (25'68); Gorabasar E. (24'23), Shahanagore E. (34'13), Sujaganj E. (23'72), Assanpur E. (23'76), Dowanerul E. (25'78); Dowlatbaar E. (21'22); Kaligang E (22'30), City Murshedabad T. (20'82), and Bhagwangola E. (20'72). In Ehulna, Magura E. (24'66); Kalanua E. (23'05), Satkhira E. (23'50), and Dumura E. (21'17).

RAJSHAHYE DIVISION.—(Population 7,735,069.)

	of Vi	ntagos llagos od by r m	decrease as	Deaths	from Fe	ver in-	Ratio Pop	per 1,0 ulation i	00 of	decrease of compared	decrease of compared .	decrease of as compared	decrease of as compared 8.
Districts.	1889,	1888.	Increase or d	1889,	1688.	1864—86.	186 8.	1888.	1861—89.	Increase or leaths as with 1888.	Increase or Deachs as	Increase or Death-rates with 1888.	Increase or Death-rates
Dina;pur Raj-haliye Rungpore Bogra Pubma Dar;lling Julpasguri Total	87*70 93*70 94*38 74*13 84: 52 78*51 89*50	91-81 97-40 96 27 60-28 87-82 51-19 63-77	3 55 D 8-70 D 1-89 D 4-85 I 1-10 D 21-32 I 5-73 J	38,988 50,473 46,310 14,103 25,579 8,569 16,996 176,018	42,101 81,259 81,998 16,267 27,871 8,762 17,842	35,037 35,710 49,360 16,375 33,016 2,471 15,388 187,357	25.74 22.74 22.07 19.22 19.50 22.93 29.18	27-84 28-85 24-78 22-15 21-24 24-09 80-33 24-68	23 18 26.65 28.52 22.32 25.16 16.87 26.42	3,173 D 786 D 5,688 D 2,164 D 2,293 D 191 D 648 D 14,942 D	8,951	2:10 D :61 D 2:71 D 2:83 D 1:74 D 1:16 D 1:18 D	8'd1 J 8 91 D 1 45 D 3'10 D 8'66 D 7'06 J 2 76 J

The areas which suffered most in 1889 were—In Dinajpur, Nowabganj E. (30 94); Chintamon E. (28 64), Birganj E. (29 60); Thakurgaon E. (28 40), Dinajpur E. (28 62), Pirganj E. (28 24); Gangarampur E. (46 25); Lahganj E (29 66), Dinajpur T. (35 36), Parbatipur E (25 58), Ramasakoli E. (24 47), Homiabad E. (28 58); Banahihari E. (23 23), Pathram R (22 67); Mohadehpur E. (21 100), Parsa E. (20 21), and Pathitola E. (19 88). In Eastanappe, Tamos E. (23 53), Nawasan E (26 58), Manda E. (25 75); Beauleah R. (25 29), Burgram E. (24 77), Bagmara E. (24 30); Godagari E (23 92), Nattore E. (25 65), Putes E (22 151); Bingra E (21 39), and Panchpur E. (31 30) In Europore, Mahiganj E. (29 75); Kumarganj E. (25 65), Kaliganj E. (24 63), Mitapukur E (24 39); Kurigram E. (37 66); Nagoshwari E. (27 41); Nesbutganj E. (31 19); Bunderganj E. (24 72); Darwam E (21 47); Govindganj E. (24 41), and Ulapara E. (21 34). In Baggra, Nowabganj E. (26 51), Sherepur E. (24 72); Pachamba E (23 48); Sebganj E. (21 90), and Phunut E. (21 39). In Pubna, Raiganj E (24 58); Unatmobur E. (21 38); Bhayadpur E. (29 15), Sara E. (29 31), and Serajganj E. (29 88). In Darrilling, Phanadewsh E. (21 88); Kuiseong E. (27 64), and Darrilling, Phanadewsh E. (21 76), Indipaguri E. (28 67), Boda E. (28 40), and Palgram E. (21 68).

Julpaguri E. (28 62), Mynagori E. (27 44), Boda E. (26 40), and Palgram E. (27 68).

DACCA DIVISION.—(Population 8,705,916.)

	of Vi	ntages linges led by	decress- as with 1889.	Douths	from Fq	ger in—	Ratic Pop	per 1,0	900 of	decrease of	decrease of compared 88.	decrease of	decrease of as compared 88.
DISTRICTS	, , , ,	1688.	Increase or compared w	1889.	1886.	1884—66.	1569.	1888.	1884—68.	Increase or Deaths as	Increase or Deaths as with 1894	Increase or Death-rates with 1898	Increase or Death rates with 1964-
Dacca Faridpore Backergan; Mymensing	83:42 70:05 01:87 23:50		5.71 D 1 40 I 6 78 D 86 41 D	27,475 29,300 80,566 4-,908	25,946 20,082 28,761 45,038	27,901 18,731 30,190 85,890	12 99 13 72 16 67 14 86	12 25 12:30 15:13 15:05	18:18 11:48 15:88 11:64	1,520 I 2,308 I 1,705 I 2,030 D	428 D 8,646 I 306 I 8,518 I	'78 I 1'42 I '94 I '09 D	'90 D 2 24 I -19 I 2-72 I
Total	48'40	68.30	19-90 <i>D</i>	124,329	120,727	112,418	14 28	13.87	12-91	3,602 I	11,911 I	'41 I	1.87 /

The areas which suffered most in 1889 were—In Paridpore, Beleakandı R. (25'43). In Backerganj, Gelschips R. (22'95) ann Barhanudin R. (22'25). In Mymensing, Pingus R. (18'05).

CHITTAGONG DIVISION.—(Population 3,467,474.)

•	of Vi	ntages linges od by r in-#	decrebe as with 1888,	Deaths	fr m Fev	/er /11-	Ratio Pop	per 1,00 ulation i	00 of	decrease of compared	decrease of compared 28.	decrease of as compared	decrease of se compared 8.
Districts.	3	8 2	Incresse or compared w	1868.	1898.	1884-88.	1980	1888.	1894-88,	Increase or Deaths as with 1688.	Ingress of Peaths as with 1894—	Increase or Death-rates with 1886.	Increase or Destinates with 1886—8
Chittagong	76.69 75.30	70.70 71.49 69.77	5:90/ 6:81/ 8:17/	10,809 21,154 22,797	16,765 16,745 16,015	18,761 14,258 17,754	17'40 95'77 15'05	14*81 20*40 10*58	12·15 17·87 11·73	8,044 Z 4,409 Z 6,784 Z	6,048 I 6,896 I 8,048 I	1.69 I 5.87 I 4.52 I	6'84 I 8'40 I 8'83 I
Total	78'41	70'34	8.071	63,760	49,523	48,778	16.98	14.56	18:90	14,287 I	17,987 I	6782	5·18 J

The areas which antered most in 1850 were—In Unitinguing, Fatickchari R. (25'27) and Mirsersi R. (20'11). In Heakhall Matta E. (35'20); Ohd-ainis E. (50'30); Sudharam E. (37'20); Sundip E. (36'85); Banni R. (25'21); Fenny E. (25'33); Beguingan E. (34'21); Reinigan R. (25'30), and Lakshimpur E. (31'31).

PATRA DIVISION .- (Population 15,063,944.)

		of V	entages illages sted by ar in—	decrease as	Death	s trom Fe	ver in-	Rai Po	do per 1, pulation	eee of	decrease of compared	dorners of occupaned Bs.	decreased as com-	dermas at 188
Districts	•	1889,	1886.	Increase or compared w	1889.	1886,	1884—86.	1886.	1868,	1884-88,	Increase or Deaths as	Increase or Deaths as with 1886—	Increase or Death-rate pared with	Intress or Desthrate pared with
Patna Gya Shahahad Mosufferpore Durbhanga Sarun Chumparun		77:46 79:69 90:90 78:74 89:70 47:73 86:71	70°98 76°51 92°12 83°04 87°77 46°74 88°01	6:48 I 8:18 I 1:22 I 4:30 I 1:93 I 98 I 5:70 I	29,740 45,291 40,203 30,031 37,664 20,583 19,752	24,081 48,171 39,899 27,508 38,461 17,171 23,876	26,431 44,021 40,279 24,135 28,492 18,587 23,224	16:97 81:81 20:48 11:63 14:30 9:00 11:46	13.70 22.67 20.05 10.65 12.71 7.52 13.86	-15.08 20.71 20.49 9.34 10.81 8.13 13.48	6,146 D	8,309 I 1,270 I 77 D 5,896 I 9,178 I 1,996 I 8,498 D	8'27 J 1'86 D '40 J '98 J 1'89 J 1'48 J 2'40 D	1'80 I '00 I '04 D 2'80 I 8 40 I '67 I 2'05 D
Total	[62.80	90.09	1'84 7	223,243	218,682	205,169	14'81	14.18	13.61	9,561 <i>I</i>	18,074 7	·03 I	1.80 Z

The areas which suffered most in 1889 were—In Patna, Dinapore E. (40*45) and Barrh E. (21*32). In Gyz., Barachati E. (27*45); Arungabed E. (25*59), Nobinagar E. (25*52); Daudnagar T. (24*51); Gyz. E. (25*68); Daudnagar E. (25*60); Sherghati E. (23*16); Arwal E. (25*02); Gyz. T. (31*79), and Tokuri E. (20*08). In Shahabad, Buxar E. (27*22); Kharchar E. (28*28); Mohania E. (25*53); Sasseram E. (24*53); Dehree E. (24*20), Dhangain E. (25*63); Bhabus E. (21*70), and Piro: E. (20*09). In Durbhanga, Khajowii E. (25*99). In Chumparun, Bagaha E. (21*35).

BHAGULPORE DIVISION.—(Population 8,063,160.)

	of Vi	ntages liages ted by r in—	decrease as	Deaths	from Fe	ver in—	Rat Po	o per 1,0	900 of in—	decrease of compared	decrease of compared 88.	decrease of as com-	docrease of 18 as over, 1884–89.
Districts.	1886.	1868.	Increase or compared w	1889.	1968.	1884 - 68.	1889,	1888.	1884—88.	Increase or Deaths as with 1886.	Increase or Deaths as with 1864	Increase or Death-rates pared with	Incresse or Desth-rates pared with
Monghyr Bisaguipore Purnah Maldah Southal Pergunnahs Total	85°88 93°10 97°00 80°19 51°68 71°42	84°42 96°78 99°08 86°55 61°59	1.40 / 3.63 D 2.08 D 8.36 D .05 I	48,839 41,165 58,096 15,063 20,706	42,092 38,297 40,588 18,453 17,763 157,193	43,515 89,947 85,116 14,863 19,895	24°54 20°08 20°59 91°20 13°20 20°26	21:36 10:47 21:95 25:97 11:32	22:09 20:31 16:99 20:21 12:36	6,247 I 2,868 I 2,492 D 3,390 D 2,943 I 6,176 I	4,824 I 1,218 I 2,980 I 700 I 1,811 I	3·18 I 1·46 I 1·30 D 4·77 D 1·88 I	2:45 <i>I</i> :62 <i>I</i> 1:60 <i>I</i> :99 <i>J</i> :84 <i>I</i> 1:87 <i>I</i>

The areas which suffered most in 1889 were—In Monghyr, Shaikpura T. (30°91); Monghyr E. (29°17); Tegra R. (27°64) Kharakpur R. (97°55); Surajgana R. (87°46); Beguserai E. (87°84), Sekundra R. (24°78); Gogri E. (24°09); Shaikpura E. (21°77) and Chakai E. (21°01). In Bhagulpore, Behipur R. (28°42), Kolgong E. (28°21); Katuria R. (26°19); Bhagulpore E. (21°78); Ranka R. (24°28); Sultanganj E. (23°78); Kisenganj E. (22°24), and Pertabganj R. (20°01). In Purneah, Mothari E. (34°27) Kadwa R. (22°28); Kusha-Amour E. (22°41); Monhari R. (21°98); Kisenganj E. (21°02); Gajole R. (20°03); Arrara R. (20°79) Raniganj R. (20°21), and Purneah R. (20°21). In Maidah, Ratua R. (27°02); Gajole R. (20°65); English Bazar T. (21°96) Gomastapur R. (21°85); Kharba K. (21°60); Nawabganj R. (20°82), and Shibganj R. (20°60).

ORISSA DIVISION.—(Population 3,628,832.)

	of Vi	ntages llaves led by r in-	decrease as	Deaths	from to	ver in-	Rati Pop	o per 1,0 ulation i	00 of	decrease of compared	decrease of compared 88.	decrease of as com-	decrease of se com-
Districts.	1889,	1888.	Increase or compared w	1889.	1998.	1884-88.	1899.	1893.	1884-88,	Increase or Deaths as with 1838.	Increase or Deaths as	Increase or Death-rates pared with	Increase forfide Desth-rates pared with 18
Cuttack Poori Balasore	55 81 37 97 53 78	,52 51 3.3 97 48:68	8°30 I 4°00 I 10°05 I	20,661 8,448 10,508	16,526 2,671 7,868	15,815 2,908 8,202	11'40 8'87 11 11	9°20 3°00 8°82	6·81 3·20 8·67	4,135 I 779 I 2,640 I	4,846 I 540 I 2,806 I	2·30 I ·87 I 2·79 I	2:36 J '61 J 2:44 J
Total	20.83	45:47	9.46 I	84,612	27,065	26,920	9.23	7:45	7'41	7,547 I	7,692 I	\$-08 Z	3.13 <u>1</u>

Nil.

CHOTA' NAGPORE DIVISION .- (Population 4,225,989.)

_			45							,	/		
	of Vil	ntages llages ted by r in—	decrease as with 1888,	Deaths	from Fe	ver in—	Rat Por	io per 1,0 pulation i	00 of in—	decresse of compared	decress of compared 88.	decrease of 25 com-	decrease of
Districts.	1886	1886	Increase or compared w	1889.	1886.	1884-88.	1599,	1866.	1884£ 88.	Increase or Deaths as with 1888,	Incresse or Deaths as with 1689—	Increase or Death-rates pared with	Increase or Death-rates pared with 1
Hagaribesh Loberdugga Sugahum Manbhum	67*79 61*36 69*19 70*79	68*90 65*46 78*23 59*89	1°11 D 4°09 D 8°03 D 10°90 I	23,029 21,364 6,226 13,435	26,873 26,251 6,176 14,654	20,777 20,782 6,097 12,275	20°84 13°27 13°09 14°57	94'32 46'31 13'61 18'84	18.80 13.81 18.42 11.29	8,844 D 4,887 D 80 I 771 I	9,252 <i>I</i> 582 <i>I</i> 129 <i>I</i> 8,150 <i>I</i>	8:48 D 8:04 D :08 I :73 I	\$*04 Z *84 Z *28 Z *28 Z
Total	66-61	65.80	*81 Z	08,044	78,984	59,931	15.03	17:49	14'18	7,910 D	6,118 I	187 D	1.44.7

The areas which suffered most in 1889 were—In **Hazaribagh**, Hunterganj R. (27'70); Simoria R. (26'97); Chuttra R. (25'87); Tandows R. (22'80); Gowun R. (21'32); Dumurhi R. (21'32); Fachamba R. (20'86); Bagodhar R. (20'64); Ramghur R. (26'52); Huvaribagh R. (20'46); thutterpur R. (30'20). In Lohardugga, Daltongunge E. (34'80); thutterpur E. (36'11); Gurwali E (28'80); Mohowadand R. (23'18); Fattan R. (22'76), and Hossainabad R. (20'96). In **Hamburn**, Toondi R. (48'88).

1				In 1869.			In 1888.	* 1	Increase or	Intrones or	Increase or
•		, , ,	Admission into hospital.	Deaths.	Ratio per mills.	Admission into hospital.	Deaths.	Ratio per mille.	decrease of admission as compared with 1888.	desting as compared with 1458.	derritirates as opposed with 1996.
•.	Fever, enteria malariai simple		1 227 79	2	1:23	9 190 82	119		, 107 F 8 D	ii t	188 D

Among the native floating population there were no deaths from enteric fever during the year under review, but 5 deaths from malarial and 8 from simple fever, of which 1 died in hospital. The death-rate is :50 per mille.

In 1888 there were 22 deaths, or 85 per mille, from malarial fever and

none from enteric or simple fever.

BOWEL-COMPLAINTS.

Fifty-three thousand and seventy-nine deaths from this cause were registered in 1889, against 52,086 in 1888 and 55,612 the mean of the five years 1884—88. The Prevalence of Bowel-complaints. ratios per 1,000 of the population which these figures bear to the population are ·80, ·78 and ·84 respectively. The percentage of villages attacked was 9.56 in 1889, against 9 64 in 1888 and 10 19 the mean of the five years 1884-88. The following statement shows the comparative prevalence of the disease in urban and rural circles:—

			Numb	er of death	os in—	decrease of compared	decrease of compared 86.	Rati	io per mille	e in	decrease of	decrease of se compar- 1-88.		
	CIE	CLES.			1889.	1888.	1884—88.	Increase or deaths as with 1888.	Increase or deaths as with 1884—8	1889.	1988.	1884—88.	increase or desth-rates of with 1888	Increase or death-rates of with 1884
Urban Bural				:::	6,699 46,380	7,164 44,923	6,649 48,963	465 D 1,458 £	50 I 2,583 D	3°05 '72	2-97 -70	8°03 °76	.08 L	*09 I *04 D

Seasonal incidence of Bowel-complaint.

Month	۱.	Deaths.	• Months.	Deaths.
Jenusry February March April May June	*** *** *** ***	4,909 3,237 8,495 4,201 8,670 3,716	July September November	5,319 5,35 5,201 4,774 4,451 5,581

The seasonal incidence of the disease during the year under report derive of Bowel-complaint. is shown in the margin. The highest mortality occurred in the months of July, August, September, and December. As stated in last year's Report, there can be no doubt that the prevalence of bowel-complaints is prominently due to climatic influences acting on the poorer people, who for the most part

sleep on the ground, wear wet and insufficient clothing, and drink impure water. It is also brought about by errors of diet and inordinate eating after partial starvation. The districts which suffered most from this disease during 1889 were Balasore (6:21 per mille), Darjiling (4:94), Howrah (4:23), Serampore (3:68), Poori (3:04), Cuttack (2:72), Hughli (2:27), and Lohardugga (2:20) in the order in which they are named. These (2.27), and Lohardugga (2.20), in the order in which they are named. These districts always seem to suffer more than any others from bowel-complaints. The following diagram shows the rate of mortality from this disease in the Province, district by district:

(32)

liagram showing the death-rates during 1889 from BOWEL-COMPLAINTS per 1,000 of population in each District of the Province.

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latio of the from wel-com- inte per of popu- ation.	Burdwan.	Benkura.	Richham	Midnethown	and and	Hughn.	Springtore.	Hours	24-Pergunnaha.	Nodder.	Jestone	Harnbedabed.	Kholus,	Dinspor.	Rajahahye.	Bangpore.	Bogra.	Pubna.	Derjiling.	Julpaiguri.	Dacon.	Paridaore.	Buckerganj.	Mymenting.	Chittagong.	Nosthalf.	Pippersh.	Petria.	Gp.	Shaltsbad.	Mosafferpore.	Durchang.	Sartin.	Champerun.	Mongfigt.	Bharulpers.	Parses.	Kelteh.	Stelfal Performalie	Ontinet.	Poort.	Palatere.	Henricarh	
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44. The following statement shows the prevalence of bowel-complaints (dysentery and diarrhea) among European seamen and the Native floating population in the Port of Calcutta during 1889 and 1888:—

		EUROPEAN	e Seamen.			Nativ	E FLOATI	G POPULAT	IOW.		
•	Tu 1889. In 1888.						In 1889.	•		In 1889.	
Admission into hospital.	Deaths.	Ratio per 1,000 of popula- tion,	Admission into hospital.	Deaths.	Ratio per 1,006 of popula- tion.	Admission into hospital,	Deaths.	Ratio per 1,000 of popula- tion.	Admission into hospital.	Deaths.	Ratio per 1,060 of popula- tion.
203	6	8.69	140	6	3.86	n	9	*35	14	7	-26

INJURY

45. The deaths from injury amounted to 30,724 in 1889, against 26,967 in 1888 and 27,261 the average of the five years 1884—88. The ratios per mille which these figures bear to the population are 46, 40, and 41 respectively.

The casualties from each class of injury stood as follows:—

			Suici	IDE.		Wov	NDS.	Accin	BHTS.	SNAKE-BITE OR BILLED BY WILD BEASTS.		
PERIOD.			Deaths.		r c-nt. desthe							
		Male.	Female.	Total.	Ratio per cent. to total deathe from Injury.	Deaths.	Ratio.	Deaths.	Ratio.	Desths.	Batio.	
In the year 1889 Ditto 1879—88	:::	1,125 963	2,016 1,616	8,141 2,579	10.53 10.43	1,914 1,432	6·23 5·78	13,882 10,438	45°18 42°19	11,787 10,292	38:36 41:59	

As usual, nearly half the total mortality from injury in 1889 was caused by accidents, nearly two-fifths by snakes and wild beasts, and a little more than one-tenth from suicide. As usual, also, the greater number of suicides were women.

OTHER CAUSES.

46. The registered mortality from diseases other than cholera, small-pox, fever, bowel-complaints, and injury amounted to Mortality in the Province. 232,386 in 1889, against 226,942 in 1888 and 194,065 the average of the five years 1884—88. The ratios per mille which these figures bear to the population are 3.52, 3.43, and 2.94 respectively. The mortality under this head was thus higher in 1889 than in the two periods with which that year is compared. As no details are given in the district returns, I am unable to dilate on the probable causes of death included under the above common heading, which includes the mortality from all brain, lung, heart, liver, and kidney diseases, from scrofulous, tubercular, rheumatic, cancerous, and venereal affections, &c., &c.

47. In the Port of Calcutta, 9 European seamen were affected during 1889 with heat apoplexy and 4 died. In 1888, 22 men were affected and 8 died. The death-rate is 2.46 in 1889 and 5.39 in 1888 per 1,000 of the average strength. There were no deaths from scurvy. From other causes 21 European seamen died in 1889, against 24 in 1888, the death-rate being 12.91 and 15.88 respectively. Among the Native floating population 27 persons died from "other causes" in 1889, against 24 in 1888. The death-rate is 1.05 and .93 respectively.

SECTION VII.

GENERAL HISTORY OF VACCINATION.

48. No remarks are made under this section, as under the orders of the Government of India a separate triennial vaccination report for the three years 1887—90 is under preparation, and will shortly be submitted.

SECTION VIII.

SANITARY WORKS (MILITARY).

49. Under the orders of the Government of India, this section is not to be dealt with in Provincial Sanitary Reports.

SECTION IX.

SANITARY WORKS (CIVIL).

50. There were the same number of municipalities in Bengal during the

Income of municipalities, and the manner in which it was laid out.

Kharar in Midnapore, Dinapore and Khogal in Patna, Daltonganj, Ghorwah and Lohardugga in the Lohardugga district.

year under report as in the previous year, viz., 148. The total income of these municipalities, excluding the six named in the margin, which were newly constituted and returned no figures, amounted in 1888 to Rs. 32,91,448, including the balance of 1887. Of this income 41.33 per cent. was expended on sanitary works (original and

was expended on sanitary works (original and recurring), 16.72 on roads, 1.70 on police, and 20.12 on other requirements. In the year under review the total income of the 148 municipalities, including the balance of 1888, amounted to Rs. 29,55,158, and they spent 43.34 per cent. of it on sanitary works (original and recurring), 14.87 on roads, '75-on police (these charges are incurred only in the Howrah and Cossipore-Chitpore Municipalities), and 18.92 on other requirements. The decrease in the total income of the municipalities is due to the amalgamation from the 1st April 1889 of the major portion of the Suburban Municipality, which was the largest and most wealthy municipality in Bengal, with the town of Calcutta.

The total sanitary expenditure incurred during 1889 and 1888 is com-

HEAD OF EXPENDITURE.	TOTAL DIT	EXPEN-	Difference of 1859.				
	1889.	1888.	Increase.	Decrease,			
1	Re.	Rs.	Re.	Re.			
On conservancy, including lat-	3,27,872	4,08,323		60,951			
conservancy establishment	83,643	'8,54.792 90,491		16,264 6,848			
disposal of dead	1,28,169	96,364 6,276	29,858 7,432				
, whitest and shaghter-houses , vaccination	9,826 23,026	8,740 17,458	785 4,573				
treatment of the sick other minitary works	1,36,273	9,29,376 1,46,798	:::	7,848 10,519			
On construction, wastricturated and repair of roads.	12,81,031 4,39,709	18,00,558 5,50,526	***	79,592 1,10,617			
Total includingeroads	17,20,740	19,11,079	***	1,90,889			

pared in the margin, and shows a decrease in 1889. But the figures of 1869 do not include the expenditure of the major and most wealthy portion of the late Suburban Municipality, which, exclusive of roads, amounted to Rs. 2,30,472, and inclusive of roads to Rs. 3,27,083. On the other hand, the figures of 1889 include a small expenditure of Rs. 3,205 exclusive of, and Rs. 5,177 inclusive of, roads of the six new municipalities named in the margin of the preceding

paragraph. Deducting the figures of the amalgamated portion of the late Suburban Municipality from 1888, and adding to the figures of 1889 the expenditure of the six municipalities named above, and the figures of the municipalities of Cossipore-Chitpore and Manicktolla formed after the amalgamation of the suburbs with Calcutta, the total sanitary expenditure of mofussil municipalities

Head of Expenditure.	TOTAL M		Difference of 1889.			
EXECUTE CONTRACTOR STATES	1889.	1888.	Increase.	Decrease.		
	Ra.	Rs.	Ra.	Rs.		
On conservancy including lat- rines conservancy establishment drainage water-simply disposal of dead market and slaughter- house vadeimation treatment of the sick	8,87,372 3,38,568 85,643 1,28,162 13,708 9,525 23,926 2,21,728	2,57,067 8,28,055 82,309 78,286 6,276 8,740 14,435 2,25,888	70,315 9,685 1,334 49,926 7,433 785 7,593	3,655		
other senitary works Total On construction, maintenance and repair of roads.	1,88,279 12,81,081 4,39,709	1,28,714 11,30,081 4,63,915	7,565	14,206		
Total including road a	17,20,740	15,88,996	1,36,744			

during 1889 and 1888 is as shown in the margin. It will be seen that, whether inclusive or exclusive of roads, the expenditure of 1889 was in excess of that of 1888. It is very satisfactory to observe that there was an increase under every head of expenditure except "Treatment of the sick," which, although shown in municipal reports under the major head of "Public health," cannot properly be reckoned as a sanitary expenditure.

51. The following statement shows in order of sequence the percent-

Expenditure on original sanitary works, works of an annually-recurring nature, and municipal expenditure proper.

Bengal on original sanitary works. The expenditure spent on works of an annually-recurring nature and on all municipal expenditure proper during

1889 is also shown side by side, though not in order of sequence:-

Districts.	M	vnicipaliti s s.	Percentages on original sanitary works.	Percentages on sanitary works of an annually- recurring nature.	Percentages on all muni- cipal expenditure pro- per.	Districts.		Mobicipalities.	Percentages on original sanitary works.	of an anning nature.	Percentages on all muni- cipal expenditure pro- per.
-Pergunnahs	S Netre	chuti chokona coreganj ca coreganj ca coreganj ca coreganj ca coreganj ca coreganj ca coreganj ca coreganj ca coreganj ca coreganj coregan	18	44 18:80 18:80 28:92 18:80 18:	5 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Bughli Murshedabad Burdwan Disto Birbhum Hughli Selvergunnahs Ditto Ditto Ditto Ditto Nuddes Ditto Nuddes Ditto Nuddes Ditto Nuddes Ditto Selvergunj Mymensing Chittegong Chittegong Tipperah Petna Dechnamic Basalasad Mosnifergons Durbhamic Basaloper Hasaloper	 97 98 100 101 102 108 108 106 107 108 109 111 112	Sasseram Ghitzagong Kumerkhall Mozufferpore English Bazar ithagulpore English Bazar ithagulpore Hooghly Junzipore Borni Jehnuahad Sassesole Sonii Jehnuahad Baraset Taki Goberdamaa Manicktolia Julpaiguri Julpaiguri Julpaiguri Peropepore Hazitpore Logya Hazar Sasha	167 152 1751 148 148 118 118 118 118 118 118 118 11	5 4912 5 112	13.07 40.986 24.138 25.138 26.
24 Pergunnaha Haghii Khunia Shahabad	78 8	Serninore Debhatta Arrah	: ::	3.80 46°	75 391	046 1		Total for the	Pro-	7:89 56	88 89.0

Almost every municipanty spent a fair proportion of its income on sanitary works of an annually-recurring nature and on municipal expenditure proper, but only the first 19 mentioned in the list can be considered to have spent a fair proportion of their income on original sanitary works. The next 25 spent a proportion of their income on original sanitary works. The next 25 spent a tolerably fair amount on this account, but the remainder a very insignificant sum. In 34 towns it will be seen nothing was spent under this head. Municipalities can have no excuse now for spending little or nothing on account of original sanitary works, for, under the recent orders of the Government of India, it is an easy matter for them to obtain loans from Government for the purpose of improving the sanitary condition of their towns.

52. In Appendix III will be found in detail the sanitary works and improve-

52. In Appendix III will be found in detail the sanitary works and improve-Sanitary works executed in ments which were carried out during the year towns, districts, and by private under review in municipal towns, in the interior of individuals. The cost of

districts, and by private individuals. The cost of The list, however, is not complete, because in some the works is also stated. cases the district reports from which it has been compiled do not furnish the required information. A perusal of the list will show at once the most important sanitary works completed and in progress during the year. I need not therefore repeat the information here. It will be seen that on the whole Municipal Commissioners are doing what they can to improve the sanitary condition of their towns; but although a good deal has been done and is being done, I am again compelled to remark that in many cases municipal income is wasted on temporary works and on works of minor importance, while works of a more needed, substantial and lasting nature, such as drainage, water-supply, and public As regards latrines, I gave in last year's Report illuslatrines, are neglected. trations of three of the most suitable kinds I knew of for the mofussil towns, and I am glad to report that many municipalities have adopted my suggestion, and are constructing new latrines after the patterns of one of those plans. recommend the construction of public urinals, which many towns are very much in need of, after the plan of the urinals in Dacca, of which a sketch kindly prepared for me by Babu Jogendra Chandra Aich, c.e., Secretary and Engineer of the Dacca Municipality, is given on the opposite page. The Dacca neer of the Dacca Municipality, is given on the opposite page. The Dacca public urinals are about the most suitable and the best I have seen in the course of my tours of inspection in Bengal.

53. In almost all the municipalities night-soil is now properly trenched in accordance with the instructions issued from

Disposal of night-soil. this office on the subject.

MARKET A

54. There is nothing new to record under this head. Of the three methods of disposing of the dead practised in this country, viz., cremation, interment, and laying within the walls of an open tower, called the Tower of Silence, cremation is without doubt the best, and has everything to recommend it, not only from an hygienic, but also from an economic point of view. Interment is a very insanitary method of disposing of the dead, and the Tower of Silence method is practised to a very small extent in Bengal—by the Parsee community only. It is not an insanitary method.

55. There has been a general improvement in the conservancy of the foreshore of the river Hooghly, some of the nuisances in the Port of Calcutta.

Conservancy and sanitary defect nuisances formerly complained of having been removed. Although the drain at King's Road, Howrah, still discharges into the river, yet it is more free from pollution than it formerly was, as measures have been taken by the Municipal Commissioners of Howrah to prevent offensive matter being thrown into the drain till the proposed scheme for draining the whole town is carried out. The nuisance at the jetties, which was formerly a subject of complaint, has been removed by providing an additional latrine within the jetty enclosure. The flushing inlets have also been free from offensive smell during the year. The highly objectionable outflow of liquid sewage from Fort William has received my personal attention, and I have every reason to hope that permanent good will result. A scheme for connecting the sewers of Fort William with those of the town has already been prepared, and the Government of India has been asked to have it carried out. The defects noticed in the previous year's Report, Regarding the state of Kassi Mitter's burning ghât, have been remedied by raising a wall on the riverside,

thus preventing the cremation of bodies being seen from the river; and last but not least the serious pollution of the water of the river at Chandernagore, which used to take place owing to the practice in that settlement of throwing the refuse of the town as well as the night-soil into the river, has been stopped. The refuse and night-soil of the town are now buried or otherwise disposed of in a satisfactory manner. There was a decrease during the year under review in the number of corpses found in the river, but I regret to state that the number of carcasses is still on the increase.

SECTION X.

PERSONAL PROCEEDINGS.

Officer in charge of Department.

I was in charge of the Depart-

ment throughout the year.

Inspections made by the Sanitary Commissioner. Dates of visits. . 12th, 13th, 14th, and 1. Serampore... 15th January.
23rd, 24th, 26th, 27th, and 28th January.
17th, 18th, 19th, and 2. Mozufferpore 3. South Dum-Dum 20th February. The greater part of June. 4th, 5th, 6th and 7th 4. Darjiling ... 5. Dacca ... September. 24th, 25th, 26th, 27th, 28th, and 29th Oc-6. Patna tober. 5th, 16th, 11th, 23rd, 28th, and 29th 17th, 7. Howrah

I inspected 27 municipalities, in all, of which the most important are those named in the margin. On each of these I wrote inspection reports, copies of which will be found in Appendix IV. the case of the others which are minor towns, I did not consider it necessary to write elaborate reports, but merely took and gave short notes in the course of my inspection, regarding the most important matters of sanitation. In almost all cases I was accompanied in my inspection by the Chairman or the Vice-Chairman and some of the Municipal Commissioners, with whom I discussed fully the

November. sanitary condition and requirements of their towns, and offered them the best advice I could. During the year under review I inspected the moats or chowkis in Nattore, which have long been notorious for their insanitary condition, and suggested a means of flushing them, which is being carried out to the satisfaction of the Nattore Rajah, to whom the moats belong, and the district officers. Towards the close of the year I made

Naihati, North Barrackpore, South Barrackpore, Bara-nagore, Cossipore and Chit-pore, Manicktolla, South pore, Manicktolla, South Dum-Dum, North Dum, and Baraset.

altogether for 20 days.

an important inspection of the drainage, water-supply, and conservancy arrangements of the group of municipalities noted in the margin, and suggested improvements which are now being discussed, and will probably be carried out shortly.

A copy of my report is included with the inspection reports of towns in Appendix IV.

58.

Lecture on Hygiene.

Special reports submitted to Government, and important circulars.

In my capacity of Professor of Hygiene in the Medical College I delivered 20 lectures to 45 students, and also conducted the usual test and honour examinations.

> 59. During the year under review I submitted special reports to Government on the following subjects:-

(1) regarding the outbreak of cholera (1) in Dr. Smith's family at Kurseong and (2) in the Darjeeling hills generally;

(2) regarding the amalgamation of the Sonthal Pergunnahs Circle with the Darjiling Circle of Vaccination;

(3) regarding the flushing of the moats in the town of Nattore;

(4) regarding the establishment of animal vaccine depot at Darjiling; (5) regarding the proposed Bill to provide for the isolation of lepers

and the amelioration of their condition; and several other reports of minor importance, which it is not necessary to mention specially.

The important circulars issued by me during the year will be found in Appendix VI.

Dr. Vincent Richards was in charge of the Port of Calcutta from the beginning of the year up to the 14th September, Work of the Health Officer of the when, on account of serious illness, to which he Port of Calcutta. succumbed in a few days, he was temporarily relieved by Dr. G. Jameson, Resident Surgeon of the Medical College, who performed the duties of the Health Officer of the Port in addition to his

own duties up to the 11th November, on which date he made over charge to Dr. R. MacLeod, the permanent incumbent appointed by Government. During the year under report 1,443 vessels were inspected, against 1,464 in 1888. The reduction in the number of vessels inspected is unimportant. I take this opportunity of expressing my deep regret at the untimely death of Dr. Richards, in whom the Government has lost a zealous, energetic, and efficient officer. Dr. MacLeod and the Sanitary Inspector, Baboo Nunda Lall Haldar, both performed their duties to my entire satisfaction.

Work of the Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination in connection with their sanitary duties, 61. The number of towns and villages visited by each Deputy Sanitary Commissioner and each Deputy Superintendent of Vaccination in connection with their sanitary duties is contrasted with

the outturn of last year's work in the following table:-

			IN HI	BER OF ND V11.1. S JURISI (EN PRO)	AGR4	NUK.		Tow Visi	và si	B#		
Circle.	Superintenden(s.	Peputy Superinten- deuts.) 371	ag istra Reporte	THS'	1	1889 -9 0.		1	888-89.		Remarks.
			Towns.	Villages.	Total.	Towns.	Villages.	Total.	Towns.	Villeges	Total.	-
	K. P. Gueta	400	54	50,733	50,787	Sı	454	485	18	607	520	
i	1st Metropoli-	U. C. Ghose	22	12,775	12,797	10	461	471	16	658	674	
etropolitan	tan Circle. 2nd Metropoli-	P. N. Mitter	11	9,938	9,947	8	677	685		646	646	
CIRCLE.	tan Circle. Srd Metropoli-	H. C. Sen	13	7,696	7,709	8	472	480	9	386	395	
	tan Circle. 4th Metropoli- tan Circle.	A. T. Law	8	20,326	20,834	6	601	607		714	714	
1	L. A. Waddell		10	52,327	52,337	7	507	514	6	305	311	
	}	Tajmul Hos-	4	17,008	17,012		395	395		811	311	
Orboth.		R. C. Mosum- dar.	3	19,817	19,850	2	205	207	{:::	47 80	47 80	By Chooni L Dass.
		S. P. Dass (now).	2	14,777	14,779		340	349				He was appoint during the years of October.
!	N. N. Gupta	••••	15	41,452	41,467	7	298	305	8	278	281	
ASTREN SEN- GAL CIRCLE.		Satya Hari Chatterjee (new),	12	80,917	30,929		185	135			***	A new appointment (from Janua 1890).
, 1	,	Bejoy C. Mukerjee.	3	10,535	10,588	2	248	250		455	455	The work of 1888 was performed U. D. Roy, retir
i	M. N. Sen	•••••	11	25,497	25,499	10	444	454	1	344	845	,
SEHAB CIRCLE		Nitys Prosad Bhuttachar- jee (new).	10	17,728	17,784	5	279	284	7	322	329	The work of 1888 was performed B. C. Chuck
1	J. J. Wood		5	24,068	24,069	2	86	88	2	42	44	butty, who w
RANCHI CIB- CLB.		H. C. Dey A. C. Chucker- butty.		8,476 15,587	8,478 15,591		373 407	375 500	"i	175 529	175 523	Orissa in Dece ber to act for h P. Vurish Naid on leave.
RISSA CIROLE	Mr. P. Vuriah Naidu up to 20th Decem- ber 1839. B. C. Chucker- butty from 21st December 1889.		2	20,381	20,383		223	222 340		751	751	

Of the Deputy Sanitary Commissioners, Dr. Waddell, it will be seen, performed the largest number of inspections and Dr. Wood the smallest number. The latter's record of work, I regret to say, is very inadequate. Of the Deputy Superintendents of Vaccination, Assistant Surgeon P. N. Mitter of the 2nd Metropolitan Circle performed the largest number of inspections, and Assistant Surgeon Satya Hari Chatterjee, of the Eastern Bengal Circle, the smallest number, but this officer's appointment under this Department only dates from January last, when more than half the working season was over, so that he is not to blame for the small amount of work shown against his name.

All the superior officers of the Department were careful in the course of their inspections of villages to point out to villagers the chief sanitary defects they observed and the way in which they could most easily and inexpensively be remedied. A very good and simple pamphlet entitled "A few simple hints on the Way to Health and general sanitation of villages in Bengal," written by Dr. Gupta, Deputy Sanitary Commissioner, Metropolitan Circle, was purchased by Government and distributed free to village punchayets and other headmen.

Sanitary condition of towns and Deputy Sanitary Commissioners and Deputy Supervillages visited by the superior officers of the Department.

Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination was reported to this office, but as the information furnished is more or less the same as that already published in previous reports, I have included in Appendix V of this Report the sanitary condition of those towns and villages only which have not been published before. My office copy of the statements published with the annual reports of this Department for 1887 and 1888 has, however, been corrected and brought up to date, and when the remaining towns and villages of the Province have been inspected, the entire list will be reprinted and published with the annual report of the year. The complete list will be of very great help to the Sanitary Board which has been constituted, but has not yet done any practical work, because the Sanitary Engineer, who is to be a member of the Board, has not yet been appointed, and nothing can be done until he is appointed.

63. With one or two exceptions, the conduct of all the officers of this Department was good and their work creditable. Dr. Gupta, Dr. Waddell, and Assistant Surgeon Norendro Nath Gupta, Deputy Sanitary Commissioners of the Metropolitan, Darjiling, and Eastern Bengal Circles, respectively, and Mr. Price, my Personal Assistant, deserve special mention for the valuable help they afforded me in carrying on the work of this Department during the year, and for the excellent work they all did in the cause of sanitation. The Head Assistant of my office, Baboo Bidhoo Bhusan Sinha Roy, has also conducted his duties to my entire satisfaction, and the clerks generally have behaved and worked well.

The 2nd June 1890.

W. H. GREGG, M.B., M.B.C.P., LOND.,

DIP. PUBLIC HEALTH, CAMB.,

Sanitary Commissioner for Bengal,

APPENDIX No. I.

VITAL STATISTICS OF THE DISTRICTS OF BENGAL

FOR THE YEAR 1889.

Annual Form No. I.—BIRTHS registered in the Municipalities and Towns in the Districts of the Bengal Province during the year 1889.

Annual Form No. I.—BIRTHS registered in the Municipalities and Towns in the Districts of the Bengal Province during the year 1889—concluded.

1			1	8	1. •	1	5			6		7	8 -	9	
						according to 1881.		BER OF BGISTES			RATIO OF BIRTHS PER 1,000 OF POPU- LATIOS.				1,000 of
Districts.			Municipalitia	S AND TOW	Population ac Census of 18	Male.	Pemale. Total.		Male.	Female. Total.		Number of males to every 100 fan born.	Excess of Bi Destine per Population.	Rocess of D Births per Population,	
aliabad		98 99 100 101	Arrah Buxar Dumraon Jugdispur	*** ***		48,465 17,668 17,836 12,591	560 129 238 183	506 131 230 175	1,075 260 468 358	13.09 7.80 13.84 14.54	11:64 7:41 12:89 18:90	24'73 14'71 26'24 28'45	• 112 98 103 164	9.55 6.62	9°9 8 0
ozufferpore	ا }	103 105 104 105 106	Sasseram Hhabua Mozufferpore Hajipore Sitamarhi			21,818 5,728 • 42,742 25,695 6,125	875 97 453 818 125	345 80 414 239 135	720 177 867 557 260	17:18 16:93 10:59 12:37 20:40	15.81 13.86 9.80 9.80	83.00 80.90 90.28 21.67 43.44	108 131 169 139 92	1 20 10 28	18°
rbhanga		107 108 109 110	Lalganj Durbhanga Madhubani Roserah Chupra	*** *** *** *** *** ***		16,783 66,096 11,911 11,578 51,670	214 1,174 810 157 694	164 1,024 812 133 669	398 2,198 622 290 1,363	18:94 17:76 26:02 13:56 13:43	9.77 15:40 26:19 11:48 12:94	28.71 83.25 52.22 25.04 26.87	143 116 99 118 104	2·19 16·29 1·81 4·78	1
un	₩.	112 113 114	Sewan Revilganj Rettish	***		13,819 12,493 21,263	238 195 405	242 187 402	480 882 807	17.86 15.60 19.04	18'16 16'96 18'90	86'08 80'57 87'95	98 104 100	8'14	***
-	{ []	115 116 117	Motibari Monghyr Jamalpore		:::	10,807 57,520 18,563	168 1,038 832	139 908 288	307 1,941 620	16:29 17:95 24:47	13'48 15'78 21'23	29.78 83.74 45.71	120 113 115	8·20 3·25 7·15	
nghyr	{	118 119 120 121	Burhia Shaikpura Jamooi Bhagulpore	***		7,904 - 12 517 5,445 57,458	98 157 89 878	82 143 96 764	180 800 185 1,642	12:39 12:54 10:53 15:28	10'37 11'42 11'36 13'29	22.77 23.96 21.90 28.67	119 109 92 114	8.69	38 12
rneah	{	128 128 124	Purnoah Maldoh English Basar			15,016 4,694 12,430	187 72 198	95 64 187	232 156 385	9·12 15·33 15·92	6'32 13'63 15 04	15.45 28.97 30.97	140 112 105	3.09	14
thal Pergunnahs	}	1:5 126 127	Dumka Shahebganj Rajmebal			2,075 6,512 8,839	48 68 55	48 54 45	91 124 100	23°13 10°44 14°39	20:72 8:59 11:72	43°45 19°04 26°04	111 121 122	***	88° 8°
tack	}	128 129 130	Dooghur Cuttack Kendrapara	*** ***	::	8,005 43,239 15,690	51 890 266	45 881 283 186	96 771 549 298	7.64 9.01 16.94	6.74 8.61 18.63	14:38 17:83 34:97	135 103 94	2.99	13· 2· 2.
ori zaribagh	{	131 132 138 134	Jajipur Poori Hazaribagh Chattra	*** *** ***		11,483 24,784 15,306 11,900	162 318 254 199	275 274 274	593 528 586	14'42 12'83 16'59 16'72	12-10 11:09 17:00 15:71	26.62 23.92 84.49 82.43	119 113 92 106	2715 1717	47
gbhum nbhum		135 136 137	Ranchi Chybassa Purulia			18,443 6,000 9,304	177 67 162	147 88 125	924 95 287	9·59 9·49 17·41	7·97 6·32 13·43	17:56 15:81 30:84	120 150 129		10° 12° 18°
	- Ì		TOTAL POR THE			2,422,094	29.218	25,948	55,166	12.02	10.76	32.76	119	-::-	3

Office of the Sany. Commr. for Bengal,

The 24th May 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

Annual Form No. II.—Deaths registered in the DISTRICTS of the Bengal Province during the year 1889.

1	8	8	•	5		8		7		8	,	9			
-	DISTRICTS	s of 1861.	nare miles.	verage Population per square mile.		BER OF 1		f males died 100 deaths 8.		O OP DE	POPU-	PRE	DRATH		
Number.) DISTRICTS.	Population to Census	Ares in square	Average per squa	Male,	Fernale,	Total.	Number of 1 to every of female.	Male.	Pemale.	Total.	Kalo	Penale.	Total.	
	Burdwan Division.														
1 2 3 4 5	Burdwan	1,391,993 1,041,752 794,428 2,515,565 6/3,050 851,956	2,697 2,621 3,756 5,082 880 343	516°06 597°46 452°40 494°09 753°46 1,026°11	17,906 11,900 11,223 30,632 8,718 5,184	16,018 9,911 10,515 27,007 7,905 4,611	83.918 21,711 21,738 58,299 16,628 9,795	121 125 115 118 121 114	26.79 93.26 19.41 24.63 27.61 29.70	22·13 18·58 25·46 21·74 22·74 25·96	24*38 20*84 27*36 23*17 25*07 27*83	91°27 19°56 27°34 38°04 94°08 22°43	19*78 15*74 28*98 19*99 20*26 18*57	21.91 17.60 25.58 21.45 22.08 20.43	
	Total of Hughli, includ- ing Serampore	1,015,005	1,223	829-93	13,902	12,516	26,418	119	28:37	23.84	26.03	23.49	19*69	21.23	
7	Howrah	635,381	476	1,334.83	8,335	6,772	15,107	124	26.88	21.33	23.77	22.76	18.40	20.21	
	Presidency Division.														
8 9 10 11 12	84-Pergunnahs	1,673,362 1,655,72+ 1,939,375 1,826,790 1,079,948	2,097 2,755 3,925 2,144 2,077	771·78 600·98 663·03 572·20 519·96	18,089 19,688 27,081 17,258 14,185	14,484 16,417 23,597 14,865 12,823	82,578 36,125 50,678 82,123 27,008	118 126 117 127 90	21'01 24'48 28'23 20'42 24'95	17.82 19.83 24.08 28.21 25.06	19:46 21 8t 24:13 26:18 25:00	21:32 84:47 26:85 28:46 23:55	15·56 27·07 21·61 92·23 24·03	19*99 80*67 23*95 25*21 23*77	
	Rajshahye Division.														
18 14 15 16 17 18 19	Dinajpur	1,514,546 1,539,603 2,097,964 783,393 1,3+1,728 155,645 582,390	4,118 2,361 3,484 1,498 1,847 1,234 2,834	\$67.74 566.98 601.83 460.28 710.19 126.53 201.65	22,944 18,471 27,750 9,147 15,843 3,195 10,373	19,625 16,079 82,924 8,119 12,6*3 2,439 8,966	42,569 34,550 50,674 17,266 38,466 5,634 19,339	109 118 116 109 128 97	20·32 27·16 25·19 24·57 24·43 36·75 83·90	26.80 23.08 22.16 22.17 19.02 34.79 32.43	28·11 25·79 24·15 23·54 21·70 86·19 33·20	27°44 83°74 28°71 28°24 81°89 24°45 30°60	23·18 27·83 24·70 24·90 25·28 24·11 27·95	25*88 80*73 26*74 26*80 28*55 24 81 29*84	
	Dacca Division.		1		1		Į					.	i		
20 21 22 23	Daces Faridpore Backerganj Mymensing	2,116,350 1,631,734 1,900,889 3,056,943	2,797 2,247 8,649 6,287	756-65 719-78 5208 485-44	24,396 18,784 80,587 32,291	20,448 15,410 27,742 26,191	44,774 84,194 58,279 58,482	124 125 104 119	28·52 25·47 31·36 20·75	18:88 18:76 29:91 17:44	21°15 20°95 30°65 19°13	93·10 18·58 97·61 17·61	19'06 14'86 87'41 14'78	21:04 16:70 27:51 16:22	
1	Chittagong Division.		ĺ		.				1	l					
24 25 26	Chittagong Noakhali Tipperah	1,182,341 820,772 1,514,861	2,567 1,641 2,491	441·11 500·17 609·93	12,201 18,316 19,418	11,820 12,910 16,540	24,021 26,226 35,958	116 100 113	22:04 32:06 25:26	19'67 81'83 22'17	21'21 81'95 25'74	18.74 22.48 19.69	15*20 22*58 17*02	16°86 22°53 18°67	
	Patna Division.	1			1					ĺ	Ì		l		
28 29 30 31 38	Patna	1,751,559 2,124,682 1,964,909 2,582,060 2,648,447 2,885,679 1,721,608	2,079 4,712 4,965 3,003 5,835 2,622 8,681	845.05 450.91 459.15 859.83 789.64 869.71 487.67	92,869 29,154 28,070 23,011 25,728 25,417 15,731	21,000 27,530 24,631 18,359 21,621 20,500 13,004	43,868 86,684 59,710 41,370 47,849 45,917 28,735	713 109 121 130 122 137	26'60 27'94 29'54 18'18 19'85 23'40 18'06	23:46 25:46 24:27 13:94 16:16 17:08 15:28	25.04 26.67 26.82 16.02 17.97 20.08 16.69	26°26 26°47 29°49 16°84 16°35 24°08 24°63	22:73 26:72 24:03 12:47 18:11 17:23 20:56	24.46 28.07 27.14 14.61 14.70 20.47 29.62	
	Bhagulpore Division.														
35	Monghyr Bhagulpore Purnesh Maldah Sonthal Rergunnahs	1,969,774 1,966,158 1,848,687 710,448 1,568,098	8,921 4,248 4,950 1,891 5,450	502'87 460'67 878'02 878'70 257'41	\$1,354 28,390 31,615 9,740 15,907	28,938 24,728 25,852 7,693 11,950	6n,292 58,124 57,467 17,438 27,857	111 116 118 132 133	82:35 29:00 33:73 28:08 20:25	28-91 25-05 28-35 21-16 15-26	30°60 27°01 31°28 24°53 17°78	50°10 28°32 22°64 27°71 17°28	26:15 34:60 18:66 20:58 13:54	12-26 27-06 20-69 30:45 38-09	
	Oriesa Division.			1	1			1	-	İ		l			
40	Cuttack	1,798,065 888,467 945,280	8,688 2,478 2,066	49 1·09 369·27 457·54	27.988 21,367 19,012	26,425 18,874 17,592	84,413 40,181 86,604	110 111 113	81.68 47,70 41.19	28·80 42·71 36 30	30°31 45°28 86°72	21·74 25·47 25·68	19:80 24:48 23:23	20'75 21'96 24'80	
43 48 44	Chota Nappore Division. Hazaribagh	1,104,742 1,609,244 453,776 1,088,228	7.021 18.045 5/7.58 6,147	157:35 153:60 120:90 255:18	14,748 20,568 6,111 12,210	15,294 17,351 4,059 10,098	28,042 87,854 9,140 82,308	113 120 127 122	27-06 25-73 22-54 23-24	25°74 21°35 17°74 18°94	25°58 23°52 20°14 21°08	25:46 21:18 21:58 18:77	22:26 18:04 17:22 15:07	23°84 19°59 19°30 16 91	
	TOTAL POR THE PRO-	65,869,584	144,280	457'82	856,574	740,904	1,597,478	117	26.53	£2:81	94.59	24.30	20.48	38.38	

The 24th May 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

Annual Form No. III.—Deaths registered in the Districts of the Bengal Province during EACH MONTH of the year 1889.

1		3													
Number.	Districts.	January.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	TOTAL DEATHS REGISTER DEATHS THE RING THE YEAR THE YEAR THE YEAR THESE		
	Burdwan Division.														
1 2 3 4 5	Burdwan	1,637 1, 1,709 1, 5,462 4, 1,463 1,	218" 2,619 553 1,955 607 1,531 486 4,445 232 1,257 536 518	8,097 2,421 2,024 5,278 1,286 635	2,327 1,939 1,384 3,576 875 458	2,864 1,684 1,541 8,667 795 497	8,755 9,802 9,457 4,666 1,148 648	2,954 1,876 2,120 4,429 1,286 742	2,716 1.809 1,743 4,917 1,560 877	2,800 1,505 1,807 4,818 1,689 1,012	2,844 1,848 1,698 5,362 1,966 1,883	3,273 1,662 2,027 7,206 2,127 1,662	83,918 31,711 21,788 58,299 16,688 9,795		
	Total of Hughli, including Scrampore	2,240	,768 1,775	1,981	1,863	1,292	1,796	2,028	2,487	2,651	3,838	2 ,809	\$6,418		
7	Howrah	1,857 1	,177 1,171	1,085	896	754	1,083	1,195	1,256	1,265	1,575	2,293	15,107		
	Presidency Division.					Ì	1								
8 9 10 11 12	24-Pergunnaha	8,360 2 5,154 3 2,616 2	356 2,555 298 2,666 130 8,203 ,000 3,155 ,716 2,274	2,576 4,183 4,636 4,238 2,566	1,892 8,026 8,110 2,498 1,670	1,834 2,578 2,877 2,047 1,561	2,802 2,804 8,441 2,696 1,979	2,340 2,472 2,851 2,259 1,576	2,901 2,630 3,492 2,611 2,014	2,703 8,825 4,401 2,866 8,280	3,274 5,013 6,138 2,515 2,900	4,880 3,785 8,245 2,627 3,800	32,578 36,125 50,678 32,123 27,008		
	Rajehahye Division.				1			1	Í	l					
13 14 15 16 17 18	Dinajpur	3,149 2 5,320 4 1,686 1 2,778 1	,244 3,526 ,152 2,438 ,355 4,608 ,254 1,268 ,862 1,998 281 366 ,196 1,274	4,248 4,109 4,455 1,722 8,235 575 2,163	2,862 2,553 8,484 1,084 2,061 597 2,141	3,470 1,836 3,217 919 1,578 592 1,466	2,626 2,323 3,348 1,214 1,910 710 1,531	2,858 1,052 2,085 1,086 1,546 .545 1,153	3,187 2,401 2,848 1,266 2,178 461 1,226	8,441 8,350 8,654 1,601 2,908 406 1,572	4,239 3,544 5,066 1,518 2,624 374 1,728	6,668 4,743 7,486 2,758 8,798 417 2,402	42,569 84,550 50,674 17,266 28,466 6,634 19,839		
	Dacca Division.				-										
20	Dacca		3,201 3,701	5,890	2,914	2,139	2,562	2,077	2,889	8,547	4,255	7,112	44,774 34,194		
21 22 23	Faridpore Backerganj Mymensing	5,409 4	8,002 8,037 6,417 7,631 6,312 8,815	5,156 6,682 5,868	2,990 8,891 5,119	1,533 8,058 8,948	1,689 3,101 5,007	1,361 2,341 3,413	1,853 2,946 4,011	2,808 8,958 4,796	8,704 5,991 4,977	5,612 8,869 7,750	34,194 58,379 58,482		
	Chittagong Division.														
26 26 24	Chittagong Noskhali Tipperah	2,366	1,919 1,745 1,852 2,310 2,923 3,170	1,869 2,867 3,827	1,502 2,084 2,842	1,885 1,838 2,022	1,951 2,852 2,725	1,772 1,588 2,040	2, f 34 1,541 2, 265	2,143 1,648 2,565	2,153 2,229 2,960	8,080 8,603 4,659	24,021 26,226 35,958		
	Patna Division.	•													
27 28 29 80 81 32 83	Patna	3,420 3,516 2,604 2,713 2,761	1,826 1.771 2,518 2,546 2,363 2,307 8,100 2,018 2,378 2,504 2,575 2,918 1,424 1,522	2,787 8,578 8,810 2,765 8,346 4,007 2,458	9,578 9,765 9,618 9,872 8,004 8,311 2,159	2,767 3,186 2,479 2,207 2,876 3,082 2,068	5,718 5,507 5,241 3,660 4,310 4,720 2,443	5,884 7,451 6,260 4,098 4,862 4,563 2,289	5,883 7,500 7,017 5,123 5,429 4,976 2,536	5,072 7,575 6,909 5,988 6,373 4,937 3,001	3,955 5,803 5,516 4,510 4,993 4,156 8,205	3,783 5,060 4,681 4,135 4,557 3,991 3,659	43,868 56,684 52,710 41,870 47,849 45,917 28,736		
	Bhagulpore Division.														
34 36 36 37 88	Monghyr	3,505 5 4,321 8 1,660	2,763 2,714 2,922 3,496 904 1,093 1,421 1,404	8,924 5,581 15,115 2,259 2,511	3,116 3,918 3,807 1,689 8,351	8,278 3,151 2,379 1,031 1,951	5,858 4,669 2,629 1,246 3,816	5,775 4,668 2,157 850 3,901	7,587 5,428 2,071 978 2,930	8,686 6,377 8,768 8,117 - 2,461	6,626 5,297 8,416 1,588 1,947	6,402 5,004 4,716 2,028 2,048	60,293 53,124 57,467 17,433 27,857		
	Orissa Division.	•								,			•		
39 40 41	Cuttack	2,006	2,567 1,444 1,646 1,796 1,811	3,876 3,209 8,675	4,990 5,556 4,880	6,383 8,128 6,468	6,556 5,594 8,478	4,409 2,538 2,291	8,798 1,967 9,298	3,961 1,654 2,093	5,551 2,599 2,726	6,973 8,645 3,844	54,413 40,181 86,604		
	Chota Nagpore Division.									,					
43 43 44 45	Usvaribagh	2,691 648	1,476 2,031 586 1,191 1,447	2,294 2,929 639 2,245	1,970 2,384 887 1,911	1,892 2,638 738 1,820	2,710 3,962 932 2,807	3,008 5,986 925 3,649	2,825 5,141 841 1,980	1,990 3,255 694 1,768	2,514 2,866 600 1,880	2,416 2,442 478 1,796	28,042 87,854 9,140 , 22,308		
	TOTAL FOR THE PROVINCE	125,968 9	6,187 118,505	157,801	114, 896	108,659	188,060	198,818	185,179	145,610	147,795	184,588	1,597,478		
	RATIO OF DEATHS PER"1,000 OF POPULATION	1.01	1'46 1'78	2.88	174	1.63	\$-00	1.83	2.09	2:25	9'34	# 80	24.25		

Office of the Sanv. Commr. for Bengal,

The 24th May 1890

W. H. GREGG, Dip. Publ. Health, Camp.,
Sanitary Commissioner for Bengal.

Annual Form No. IV.—Deathe registered according to AGE in the Districts of the Bengal Province during the year 1889.

1		8		4		5		6		, 7			8	. \$		10	•)1		13	recipies.
	Districts.		er 1 B.	1 AN UNDE YEAR	B.5	5 AI UNDE YEA	R 10	10 AN UNDE YEA	R 15	18 A UNDE TRA	R 90	A OS RUNU RUN AUY	R 30	A OS EGNU ARY	R 40	40 A UMDI YRA	EE 50	50 AT UNDE	E 60	60 YEA	D .
Number.	•	Male.	Female.	Male.	Female.	Male.	Female.	Halo.	Fernale.	Male.	Female.	Male.	Femsle.	Malo.	Female.	Mafe.	Pemale.	Male.	Fernale.	Male.	Female.
1 9 8 4 5	Burdesa Division. Burdesa	3,566 2,293 3,266 5,984 1,961 1,018	2,792 1,846 2,714 5,164 1,492 836	1,406 1,086 1,200 3,199 797 567	1,121	1,077 757 723 1,870 459 847	905 646 605 1,770 404 527	811 616 459 1,882 805 253	594 879 846 953 238 204	957 890 496 1,623 418 210	1.688	1,383 1,110 3,187	3,221	1,800	1,010 901 2,6%7	1,095	1,547 794 915 2,394 773 427	1,414 930 753 2,608 601 471	1,308 806 714 8,884 679 401	9,111 1,400 1,199 4,190 987 588	9,287 1,384 1,360 4,275 1,028 685
	Total of Hughli, includ- ing Serampore	2,974	2,328	1,864	1,822	806	731	558	442	638	759	1,657	1,782	1,646	1,813	1,604	1,200	1,169	1,073	1,498	1,617
7	Howrah	1,914	1,441	962	892	520	416	328	922	898	817	743	644	847	547	714	470	577	498	1,817	1,385
8 9 10 11 12	Presidency Division. 24-Pergunnahe	2,632 4,062 3,782 2,968 2,689	2,212 3,228 3,334 2,362 2,073	2,145 2,569 3,587 2,389 1,896	2,504 8,469 2,148	1,875 3,012	2,807	890 1,824 1,855 1,063 683	597 858 1,811 665 464	1,025	812	1,666 2,825 1,738	1,528 2,895 1,581	1,785 2,809 1,791	1.277 9.381 1.867	1,782	1,196 1,186 1,909 1,253 936	1,472 1,378 1,864 1,181 977	1,188 1,021 1,659 1,165 784	2,508 2,827 3,186 1,886 2,143	9,108 9,858 9,786 9,207 1,785
18 14 15 16 17 18	Rajshahye Division. Dinajpur	8,421 2,955 8,935 1,998 1,881 332 2,271	2,907 2,418 3,095 1,529 1,358 805 1,757	2,845 2,158 2,860 1,002 2,322 899 1,014	2,196 2,459 1,010	1,893 2,035 759	1,544 1,554 648	1,205 1,181 1,398 461 1,304 207 512	979	1.208	1,335 1,618 597 975 180	2,383 3,437 949	2,889 3,578 1,190 1,454 404	2,423 4,035 1,039 1,637 495	1,872 3,331 890	1.756 3,506 910 1,282 807	1,939 1,859 2,417 661 906 178 922	1,542 993 9,218 653 649 200 797	1,178 779 1,646 409 639 132 638	9,609 1,431 8,136 946 1,735 216 1,065	1,809 1,814 8,197 988 1,607 194 808
20 91 22 23	Dacca Division. Dacca	4,897 2,942 6,902 4,253	3,519 2,285 5,594 8,008	3,138 2,576 4,641 3,642	2,204 4,059	1,688	1,522 9,398	1,848 1,157 1,529 1,827	761 768 1,087 1,205	901 930	1,314 1,068 1,481 8,108	2,064 1,788 2,186 3,585	2,849 1,856 3,634 3,839	9,329 1,858 2,593 3,890	1,983 1,568 2,657 3,042	2,119 1,740 2,878 3,428	1,800	1,596 1,427 2,921 2,523	1,107 1,061 1,575 1,794	4,005 2,767 4,913 4,681	8,729 9,186 8,649 3,543
24 25 26	Chittagong Division. Chittagong Noakhali Tipperah	1,646 2,746 4,004	1,890 2,438 8,236	1,867 2,746 2,400	2,000 2,815 2,031	1,001 1,199 1,411	950 1,278 1,166	599 670 1,042	415 456 823	531 435 1,124	658 561 1,815	998 871 1,028	1,298 1,881 2,205	1,21 2 1,007 1,833	1,074 997 1,452	1,246 881 1,539	848 684 1,064	1,087 828 1,277	950 684 1,016	1,954 1,988 2,761	1,987 1,786 9,988
97 98 99 80 81 82 33	Patna Division. Patna	5,048 4,710 4,875 1,890 2,843 5,108 8,215	4.476 4.388 4,141 1,646 2,501 8,591 1,789	3,929 4,624 3,552 2,842 3,844 4,051 2,302	3,573 4,425 3,869 2,513 3,572 8,137 1,999	2,105 2,128 1,896 2,816	1,205 1,779 1,667 1,406 1,625 1,026 902	1,227 1,820 1,494	564 1,088 790 684 829 610 448	669 939 864 1,042 1,189 766 671	564 858 624 624 841 532 451	2,348	1.556	2,604 2,833 2,840 2,846 2,321	1,798 9,298 1,724	2,005 3,027 2,941 2,913 2,800 2,204 1,714	3,086 3,280 1,716	2,284 8,091 3,851 2,596 2,489 2,000 1,496	2,913 3,897 3,659 3,367 3,256 1,891 1,851	8,058 4,436 4,318 8,103 3,256 4,819 2,308	5,630 4,860 4,863 3,881 5,930 4,718 1,806
84 85 86 87 88	Bhagulpore Division. Monghyr	6,512 5,947 2,112 1,286 2,463	5,910 4,548 1,668 956 1,929	6,224 4,325 8,192 1,577 2,847	5,983 8,701 2,614 1,879 1,921	2.402	1,752 1,823 2,165 685 1,080	1,497 2,678 640	993 965 1,680 300 787	804 1,096 2,804 558 1,078	578 804 1,960 428 844	4,584 1,108	2,622	8,101 4,840 1,039	2,621 3,748 724	2,758 2,841 4,067 833	2,169 8,044 536	2,780 2,320 2,578 509 1,383	2,418 2,214 3,402 477 1,015	4,638 2,616 2,236 1,161 1,866	5,752 8,981 2,291 1,317 1,976
89 40 41	Orisea Division. Outsack	5,660 3,205 8,967	5,388 2,963 3,628	3,560 2,123 2,186	3,686 2,344 2,272	2,471 1,933 1,597	2,053 1,723 1,889	1,437 1,801 1,151	1,022 784 802	1,291	1,381	2,552	2,562	2,684	2,049	9,453 2,109 1,856	1.289	9,109 1,848 1,446	9,021 1,554 1,147	8,475 8,869 1,974	
48 48 44 45	Hasaribagh Loharduga Singbhum Manbhum	651	2,603 2,328 565 1,577	9,165 9,687 628 1,614	\$,081 2,561 M71 1,419	1,115 1,769 362 1,006	804	764 1,482 264 740	508 971 198 465	1,108	927	542	1,851	2,846	3,008	688	1,592	1,418 1,798 541 909	1,434 1,610 419 1,946	2,399	2,340
,	TOTAL FOR SEE PRO-	145,514	130,566	113,004	104,647	70,230	55,769	47,000	81,56	41,12	41,48	98,56	85,65	98,45	78,54	84,88	0 61,460	08,836	59,272	108,981	106,673
Marie Marie	RATIO PER 1,000 OF LIVING	189'59	154-85	38*78	94'79	18.78	11.67	12.58	10.2	100	16'8	1676	14.8	19-13	15.7	26.4	19.46	36'65	19:39	67*80	50*19

Office of the Sany. Comme. for Bengal, }

The 24th May 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

Annual Form No. V.—Deaths registered according to OLASS in the Districts of the Bengal Province during the year 1889.

1	9				8 8		•				4					•	5 ~		
-		Por	ULATION	ACCORDIN	6 TO	CHESTS OF	1881,		Numbe	R OF DI	BHTAS	REGISTE	RED.	R.	atio d	DEA POPUI	THE P	PR 1,0	00 07
Number.	Districts.	Christians.	Hindus.	Mahomedans.	Buddhiste.	Other classes.	Total,	Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Total.	Christians.	Hindra.	Kahomedans.	Buddhists.	Other classes,	Total.
3 4 5 6	Burdwan Division. Burdwan	910 56 48 740 290 365	1,120,676 9,10,845 617,310 2,238,800 538,088 \$91,615	263,616 46,274 162,621 164,001 129,702 59,637	36	8) 260	1,391,623 1,041,752 794,428 2,515,565 663,030 361,956	8 2 5 13 9 4	19,622 17,672 51,545 13,260	5,923 826 8,987 8,353 3,354 1,548		14 1,261 174 3,388	37,918 21,711 21,738 58,299 16,623 9,795	8*79 35*71 104*16 17*56 31*93 10*95	21.54 28.62 23.08 24.67	17:85 28:90 50:44 25:85	***	2'16 14'90 12'04 28'83	20'64 27'86
7	ing Serampore	655 2,051	824,648 500,870	189,359	290		1,015,005	13	21,508	8,007	.		26,418 15,107	19.84	-		***		25.77
8 9 10 11 32	Presidency Division. 24-Pergunnaha Nuddea Jeseore Murshedabad Khulna	10,167 6,422 482 470 747	1,038,114 727,880 788,328 634,796 525,657	624,082 921,895 1,170,565 - 589,957 - 555,544	240 1 1	13 86	1,673,862 1,655,721 1,989,575 1,220,790 1,079,948	130 148 7 4 9	81,286 16,012 19,750 17,812 12,851	11,157 19,970 80,921 14,907 14,748	101	,	32,573 36,125 50,678 32,123 37,008	12.78 22.26 14.26 8.51 12.04	25-70 25-70 27-27	52.00 52.47 51.63			19:46 21:81 26.13 26:18 25:00
18 14 16 16 17 18 19	Eajshahye Division. Dinajpur	457 121 84 27 114 842 125	716,630 289,128 616,634 140,481 841,479 127,181 368,756	795,824 1,050,286 1,279,665 502,825 944,965 8,206 206,409	55 60 2 1 19,775 446	1,681 58 226 641	1,514,846 1,339,603 2,097,964 738,393 1,311,728 15 ,645 582,390	4 1 2 1 1 89 	19,897 6,932 16,793 3,265 7,828 4,869 11,856	\$2,604 \$7,617 \$1,879 14,000 20,637 364 7,187		64 17 296	42,569 34,550 50,674 17,266 28,446 5,634 19,339	8·75 8·26 ¥3·25 \$7·03 8·77 \$8·00	81.65	26'29 24'90 93'61 21'72 44'35	18-74	44·59 26·52 6·41	28'11 25'79 24'15 28'54 21'70 36'19 88'20
20 21 23 23	Dacca Division. Dacca	6,799 2,741 8,717 151	856,580 65-,992 624,97 989,814	1,250,687 974,98 1,267,694 2,041,523	49 13 4,797	5	2,116,350 1,631,784 1,900,889 8,056,943	174 82 93 2	19,264 13,691 15,808 20,383	25,386 20,471 42,371 37,233		 864	44,774 54,194 58,279 58,482	19·77 11·67 25·02 13·24	20.88	20°25 20°99 33°43 18°32	¥*80	88-29	21·15 20·65 30·65 19·13
24 25 26	Chittagong Division. Chittagong Noskhali Tipperah	1,055 588 199	275,177 211,476 509,008	801,946 608,502 1,004,722	54,110 114 374	8	1,182,841 820,779 1,514,861	83 10 	5,666 5,535 11,882	17,001 20,691 84,076	1,321		24,021 26,326 85,958	81 '27 17 ' Q 0	20°59 26°12 23'34	21·19 83·96 23·96	84'4] 	***	\$1.91 31.95 28.74
27 28 29 39 81 38 38	Patna Division. Patna	96 276 372 825 282	1,535,853 1,891,454 1,817,861 2,205,380 2,223,979 2,016,766 1,476,985	213,052 253,098 146,732 316,308 808,985 269,231 242,887		66 4 20 158	1,751,559 2,124,682 1,964,909 2,588,000 2,638,447 2,295,679 1,721,608	49 2 5 4 6 3 41	\$9,262 50,682 49,135 84,490 42,226 41,287 25,042	4,557 6,000 8,570 4,886 5,117 4,627 8,652		100 041, 060 000 000 000	56,694 52,710 41,370 47,849 45,917	10.68	95°59 96°76 27°02 16°11 18°16 90°47 16°95	21.88 25.74 24.83 15.44 16.56 17.18	 	 	25'04 26'67 26'82 16'02 17'97 20'05 16'89
86	Bhagulyore Division. Monghyr Bhagulyore Purneah Maldah Sonthal Pergunnahs	578	1,774,013 1,784,304 1,46,539 879,153 847,590	187,517 186,533 771,130 829,625 108,890	 132	7,153 15,743 691 1,744 605,415	1,969,774 1,966,158 1,848,687 710,449 1,568,093	11 4 1 1 10	55,289 49,283 36,514 10,142 17,001	4,918 8,837 21,952 7,290 2,381	 	74 8,465	53,124 57,467	8.02	27 93 22 98 26 74	26-24 20-65 28-45 23-12 21-88	177 114 402 308	10:84 18:91	80:60 97:01 81:08 94:53 17:76
40	Oriesa Division. Cutack Poori	2,849 819 815	1,744,927 873,644 915,792	47,5 29 14,003 29,804	s 4	964 1 4,865	1,795,065 688,487 945,280	45 7 17	63,862 89,693 85,972	1,006 481 560	***	 55	40,181	8'54	45'48	21'16 34'84' 25'68	2.1. 1.1. 1.1.	1i '8 0	80°81. 45°22 68°73
42 63 44	Manbhum	552 36,281 2,9%8 552	934,811 869,843 447,910 945,347	106,097 97.403 2,829 45,463	1 28	626,717 648	1,104,742 1,609,244 453,775 1,058,226	9 518 87 88	23,966 16,984 9,084 20,462	2,647 2,068 70 904		1,490 18,289	87,884 9,140	16·80 14·27 13·38	19'86 90'17	24°94 2635 80°05 19°88	*** *** ***	19:57 39:18 13:78	95°86 90°14 90°14
	TOTAL FOR THE PRO-	- 1	2,731,659	1,284,287	9,613	1,866,984	5,859,534	1,558	,053,469	505,451	1,686	85,290	1,597,478	15-99	24.62	18-74	81·16	21-17	24.12

)FFICE OF THE SANY. COMMR. FOR BENGAL,

The 24th May 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Benyal.

ANNUAL FORM No. VI.

Annual Form No. VI -Deaths registered from DIFFERENT CAUSES in the

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				2					1	8	•	5	6	7
1	_		-,		,		,-	•		to Cemens				• 1
	•	Dis	TBIC:	AM.	D TO	yna.				Population according to Census of 1881.	Cholera.	Small-pox.	Pereir.	Bewel-complaints.
-			DIS	TRIC	TS.				1					
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli	 	urdu	an D	ivisio	**. *** ***	 	***		1,885,905 999,404 786,580 2,446,201 620,856	8,184 1,494 1,602 8,768 401	60 416 2 210 15 5	22,082 14,137 13,900 41,088 10,898 5,326	619 608 113 8,585 • 1,854 • 981
6	Seramporo	***	•=•	•••	***	•••	•••	•••	•••].	926,087	435	20	16,234	2,175
	** L			_		ding 5	eramj 	 9 7 00		529.753	905	19	6,222	8,838
7	Howrah	 P1	··· ·eside	 mcy 1	 Divisi	 on.	•••	•••						
8 9 0	24-Pergunnahs Nuddea Jessore Murshedabad	•••	•••			•••	•••	***		1,424,829 1,660,321 1,930,880 1,143,106	2,267 3,467 4,498 4,143 2,568	12 17 7 9	19,601 25,190 41,408 21,990 19,079	995 209 199 144 985
2	Khulna			 hye D	•••		•••	•••	***	1,064,918	2,900		20,0,0	, 330
8 4 5 6 7	Dinajpur Rajshahye Rungpore Bogra Pubna		##* ##* ##*	•••	***	***	***	***		1,501,786 1,319,812 2,084,644 727,214 1,275,424 148,627	486 1,081 608 168 701 401	8 4 8	88,692 80,128 6,068 14,044 25,197 3,424	91 78 117 84 123 714
9	Darjiling Julpaiguri	***	•••	•••	•••	•••	•••	***	:::	574,443	1,170	2	16,886	97
20 21 22	Dacca Faridpore Backergauj	•••	Dace	ra Die	oision 	•	•••	***		2,023,628 1,621,471 1,887,708	4,570 6,455 10,852	60 81 82 924	20,833 22,287 80,460	1,917 525 599 805
33	Mymensing	***	•••	 gong	 Divis	ion.	•••	***	•••	8,000,830	4,787	921	43,5G0	Out
24 25 26	Chittagong Noakhali Tipperah	***	•••	•••	•••	***	•••	***	:::	1,110,211 815,648 1,488,812	871 1,696 8,931	9 5 204	19,644 81,115 22,518	955 449 847
27	Patna	•••	Pati	na Di	vision 	•	•••	•••		1,466,516 2,038,691	1,346 2,941	402	27,602 48,890	1,891
28 29 30 31 32 38	Gya Shahabad Mozufferpore Darbhanga Sarun Chumparun		•••	•••	***	*** *** ***	410 441 444 444	***	***	1,885,941 1,885,941 2,490,715 2,567,851 2,208,197 1,700,345	8,908 8,531 8,163 1,526 784	848 750 178 223 381 1,576	80,235 99,294 86,689 19,991 19,500	407 948 1,247 8,100 260
00		B	hagu	lpors	Divis	n 4.				1 886.174	1,689	419	47,206	813
84 85 86 87 88	Monghyr Bhagulpore Purneah Maldah Sonthal Pergu	nnahs	•••	***	•••	400 400 400 400	***	***	**** *** ***	1,886,174 1,908,705 1,883,671 696,015 1,560,968	8,008 17,595 1,046 8,628	171 7 88	40,606 87,876 14,790 20,638	643 161 81 417
39 40 41	Cuttack Poori Balasore	•••	0ri	888 D	ivision 	#. 	•••	•••		1,724,897 868,708 935,015	14.517 18,080 12,781	166 807 183	20,172 5,069 10,429	4,638 9,461 5,793
42 48 48	Hakaribagh Lohardugga Singbhum			Tagpor	ro Div	ision.	•••		***	1,089,436 1,590,801 447,769 1,048,924	754 4,989 497 1,784	48 35 2 180	\$9,789 \$1,229 6,181 15,271	617 8,681 617 1,915
45	Manbhum	•••	• '''	•••	Total	 for th	 ne Pro	··· vince	***	68,666,194	168,185	8,018	1,077,740	46,880
			,	rowi	_								-	
	Design			leran .	Distri	ict.	•••	***	•••	84,080	93		469 173	184
1 2 3	Burdwan Kalua Raniganj	***	•••	***	1/4	•••	•••		•••	10,901 10,987	187	******	173	98 98
			Ban	kura	Distr	rict.	•••	•••	•••	17,895	79	86	218	50
4 5 6	Bankura Bissenpur Shonamukbi	***	•••	•••	***	***	***	•••	***	18,868 5,590	79 41 83	84	87	50 51 7
-			.	hum I			•••			7,848	• •6		101	19
7	Scori		Hidno	 pore	Distr	·lot.	***	4+4	***					
8 9 10 11	Midnapore Ghatal Chandrakona Ramjibanpor	·	610 67. 644	*** *** ***	***	***	***	*** *** ***	e49 869 444	83,560 • 42,658 12,257 10,909	84 19 88 17	**************************************	179 127 108 88	801 81 81
12 18	Hughli Jehanabad	***	•••	ghli I	***	- **	***	•••		31,687 10,807 26,496	99 11 • \$18	6	658 104 874 106	9.50 34 361
14 15 16	Baidyabatti Utterpara	***	•••	***	444 444 444		***	*** ***	***	14,718 5,810	49	1	108	- F

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Districts and Principal Towns of the Bengal Province during the year 1889.

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	•	INJUR	Y.			T.	RA	TIO C	F DEATI	IS PE	R 1,000	OF POP	CLATIC	N.	,
80:	CIDE.	nța.	killed by			TBOX				•			PROM CAUS	RO.	
Male.	Female.	Wounds or Accidents.	Snake-bite or kil Wild Bearle.	Total.	All other causes.	TOTAL DEATHS CAUSES.	Cholera.	Small-pox.	Bevers.	Bowel-complaints	Injury.	All other canses.	For the year.	Mean of previous five years.	Namber.
24 38 11 95 17	15 22	93 77 88 987 106 36	149 123 96 573 108 78	802 251 208 900 253 144	5,949 3,987 5,756 8,309 2,578 1,224	32,196 20,812 21,576 80,853 16,399 8,055	2:88 1:49 2:08 1:54 :64 1:42	*04 *41 *002 *68 *02 *01	16°53 14°14 17°67 16°79 17°55 17°44	*46 *59 *14 1*05 2*01 8*01	·22 ·23 ·25 ·36 ·40 ·47	4*45 8*93 7*31 3*89 4*15 4*01	24·10 26·82 27·43 35·24 24·80 26·38	21'60 17'87 25'62 21'24 19'11	1 2 8 4. 6
88	- [149	181	397	8,802	23,454	.80	.03	17.21	2'84	*48	4.10	25.33	90'54	-
27	28	141	115	806	8,084	12,712	1.70	.03	11.74	4.81	*87	6-72	23.99	20.07	. 7
68 54 57 22 26	74 116 141 81 40	420 123 365 105 226	826 868 394 859 160	868 861 957 517 452	2,945 5,017 3,967 2,826 4,047	26,703 84,761 50,436 29,622 26,685	1.69 2.32 3.63 3.68 2.68	*008 *01 *003 *001 *008	18·76 16·15 21·44 19·28 17·91	*69 *13 *10 *12 *22	*61 *55 *49 *45 *42	2*06 8*21 1*74 2*47 8*60	18-74 22-27 26-12 25-91 26-05	20°68 31°44 23°95 24°71 23°87	8 9 10 11 12
9 40 4 11 91 91	77 5 80 52 19	212 202 277 234 158 34 105	895 400 288 261 358 11 59	633 719 574 537 591 79 177	2,239 1,961 2,473 2,861 1,032 681 780	42,149 83,964 50,044 17,148 27,646 5,893 19,112	*32 *8; *29 *23 *54 8*30 2:03	*005 *008 *002 *005 *002 *02 *02	25'76 22'82 22'09 19'31 19'75 23'03 29'39	*06 *05 *05 *04 *09 4*80 *16	*42 *54 *27 *78 *46 *55 *80	1'49 1'48 1'28 8'24 '80 4:58	28'03 96'73 84'01 23'58 21'67 86'28 38'27	25*61 30*68 26*69 26*68 36*41 44*46 29*44	18 14 18 16 17 18
54 17 84 29	58 64	360 352 806 853	267 802 217 374	787 724 1,122 805	8,430 8,927 16,409 7,075	48,597 33,999 57,083 57,900	2·25 3·98 5·48 1·57	-02 -04 -01 -30	18°25 18'74 16'14 14'47	*94 *33 •31 *26	*38 *44 *59 *26	4·16 2·42 8·16 2·35	21·04 20·96 30·71 19·23	20·88 16·67 27·56 16·15	20 21 22 28
90	7	591 457 584	65 68 108	670 536 674	2,945 2,351 7,055	23,687 26,135 35,229	*33 2:06 2:65	*001 *000 *18	17:69 25:88 15:18	*86 *54 *57	*60 *65 *45	1°84 2°88 4°75	21:38 82:04 23:75	16.76 22.59 18.50	24 25 26
16 21 87 27	111 *86 24 2 101	592 745 595 929 092 858 888	963 367 172 628 595 402 306	932 1,248 890 1,586 1,296 1,388 1,074	6,8\$8 4,685 5,770 8,789 2,686 17,705 4,957	\$0,011 53,150 51,045 \$9,826 45,296 44,097 28,101	91 1:44 8:06 1:41 1:23 :69 :48	27 16 39 07 08 17	18:82 21:28 20:80 11:76 14:28 9:05 11:46	1°29 °27 °26 °38 °48 1'40 °15	*63 *61 *47 *68 *50 *69 *68	4'66 2'29 3'05 1'52 1'04 8'01 2'91	26:60 26:07 27:06 15:78 17:64 19:96 16:52	25:58 87:27 87:48 14:85 14:36 20:87 22:47	27 28 20 30 31 32 33
1(1(10 21	869 289 35	562 858 200 165 168	1,415 749 476 210 843	6,513 6,435 017 966 2,674	57,555 51,660 57,012 17,043 27,682	*89 1*57 9*59 1*49 2*26	*22 *08 *003 *02	25:02 20:65 21:30 20:65 21:30	*16 *38 *07 *04 *26	•75 •89 •25 •80 •21	8:45 8:37 :50 1:38 1:71	80:51 27:06 31:09 24:41 17:71	28:02 28:11 26:06 24:13 15:85	34 35 36 87 88
54 3*	169 54 3 71	273	287 79 127	1,022 443 407	12,175 13,529 6,425	52,690 38,409 36,017	8°41 20°93 13°81	.09 .83 .13	11:68 3:55 11:27	2.68 2.87 6.26	*50 *51 *43	7°05 15'66 6'94	80°54 44°47 88°93	20*79 84*21 24*45	89 40 41
5		36	161 196 154 87	575 328 289 265	3,764 7,230 1,436 3,162	27,547 37,835 8,972 21,847	*69 8:13 1:10 1:65	*04 *08 *004 *17	20°91 13°34 13°69 14°55	2.21 1.37 1.15	·52 ·20 ·64 ·25	2:53 4:54 8:20 8:03	\$5.38 28.46 20.08 20.82	28.80 19.62 19.16 16.80	42 48 44 65
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Annual Form No. VI. Denthe registered from DIFFERENT CAUSES in the

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	•	District	rs 🐼	or as	VNs.		•		Population according to Census of 1381.				phints
				•					Population of 1381.	Cholers.	Small-pox,	Powers.	Bowel complaints
j		TOWNS		ntinue									
	Howrah		· ··	:::	·.:	 •		:	90,813 14,815	488 61	19 2	585 187	393 68
	;	1-Porgun	nahs	Distr	ict.					1	<u> </u>		9
1	South Suburban Baranagore	••	•••				***		51,65 8 29,992	51 196	\$28 6	309 503	6 82 110
	Rainore		<i></i> .	•••		•••	•••		10,676 22,789	25 40		242 409	15 80
	Augurpara Nawabgani Nathatti				•••	•••	•••	:::	18,018	68	6	310 302	90
1	Nathatti							:::	21,588 20,450	96 30	1	132	84 18
-	Baduria					•	•••		19,185	ענ		130	7
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1				istrict.				ļ	•			!	
1	Kishnaghur								27,477	35		252	14 16
1	Ranaghat		•••	•••	••		•••	}	8,683 2 9,687	27	i	50 241	16 19
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1	Jossore	• •••	••	***	••	***			8,495		1		1
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١	Berhampore Kandi		•••	•••	•••	***			23,605 10,661	109 83	·	949 141	61
Ì	City Murshidabad	·	•••	•••	•••	***			89,281	207		-817 116	78 81
1	Jungipur		•••	•••	***	•••	•••	•••	10,187	66	••••	110	31
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1	Satkira Khulus	•••	***			•••	•••		8,738 6,29 2	20 59		105 54	7
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		Rungp	ore I	District	ŧ			j		1	1		į
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	Bogta		***		•••	***	•••		6,179	7		59	10
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	Julpaiguri .					•••			7,947	19	2	110	10
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	Dacon Naraingani	•• •••	•••	•••	•••	•••	•••	•••	80,161 12,561	205 121	\$1	581 111	287 54
		Faridpe		District		•••	•••		- e,v91	1	•••••	***	
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	Jamalpore Kishoreganj Tangali	Chitta	gong 	•••	 t.	***			·			,150 	
	Jamalpore Kishereganj Tangali Ohittageng	Chittai Nockh	gong hali	 Distric	•••		***		8,194		******	39	
	Jamalpore Kishoreganj Tangali Chittagong Sudharam	Chittat Chittat Nockh	gong hali	 Distric 	••• ••; , -				·			160 160 180	

Districts and Principal Towns of the Bengal Province during the year 1889—continued.

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	÷		INJURY	r.		1	AEL	RA	TIG O	P DEATE			F POP	ULATIO	nr.	
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Make		Female.	Wounds or Accidenta.	Snake-bite or Wild Beasts.	Total.	All other causes.	TOTAL DRATES CAUSES.	Cholers.	Small-pox.	Pevers.	Bowel-complaints.	Injury.	All other causes.	For the year.	Mean of previous five years.	Number,
1	8	3 2	98 4	i	32	546 61	2,063 832	5°37 4°11	'20 '13.	6'44 9'24 ,	4·32 4·25	*85 ,*53	6*01 4 *11	22°71 22°40	28:45 20:85	17 18
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	4	2 1	2 7	 5	8	100 153	416 1,024	2:35 4:52	-26	6·84 22·97	1'64 4'86	·27 ·40	3°49 5°81	14:59 38:94	Data not swallshie.	27 38
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	8	2	1	8	8	89	584	4-95		17:43	2-22	*40	4:49	29-50	37-79	. 48
	1	1	4	8	12	243	630	8-23	-07	18 [,] 16	1.98	*90	18:94	47-29	83.78	44
		•••	•		4	30	118	1.13		. 9'54	2.91	'64	4'85	19:09	22.65	45
	•••	•••	1 9 10	9 3	91 19	198 60	429 391	2·68 1·23	.08	10.88 30.01	-98 1-75	1°87 °90	12.80 2.80	28.09 18.28	89°16 84°46	47
1	***		8		s	36	841		.58	20.08	7.83	-48	5'19	84'84	21.52	48
	1		1		2	75	927	2:39	-95	18'84	2.39	*25	9-42	28.26	22.28	40
	8	:::	94 5	ì	28 6	790 140	1,745 488	8.89 8.89		8.83 8.03	2-95 4-39	*84 *47	8°97 11 14	21.76 34.39	23-98 26'35	80
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1	N44			1	5	77	884	1718	-	7-48	2.80	.53	8-47	15'00	21.78	pr
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Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the

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Number,	•	D 1	istricts .	AND TO	wns.		•	•	Population scending to Census of 1881.	Cholera,	Small-pos.	Pract.	Bevel completion.
		7	rowns	oonolud District									·
61 63 63	Patna Behar Dinapur Barrh	***			•	•••	•	***	48,971 52,225	\$28 20 41 91	114 20 28 8	916 430 551 261	594 76 58 290
65 66	Gya Daudnagar	•••	Gya I		•••	***	•••	901		462 19	10	1,659 243	61 8
67 68 69	Arrah Dumraon Buzar	***	Shahahad 		***	***		•••	17,835	20 52 103	14 19 8	461 291 215	78 74 82
	Mozufferpore	 	lozuferpo	re Distr	 ict. :::	,,,	•••	•••	43,742 6,125	51 25 43 35	4	894 104	
70 71 72 73	Sitamarhi Hajipore Laiganj	•••	Durbhange		•••	***	***	***	25,695 16,783	42 85	5 14	109 140	180 26 172 189
74	Durbhanga	***	 Sarun 1	, ,	•••		•••	•••	66,096	878	16	982	202
75 76 77	Chupra Sewan Kevilganj	 C	humparu	 n Distri	::: et,	***	•••	•••	51,670 13,319 12,493	103 26 101	43 2 6	326 96 170	162 39 51
78	Bettial:	501	 Monghyr	 District		***	•••	•••	21,263	6	3	282	27
79 80 81	Monghyr Jamalpore Shaikpura	 	 hagulpor	 e Distri c	:-: ::: :: t ,	•••	***	***	57,520 19, <i>5</i> 63 12,517	228 106 22	8 	579 169 887	883 48
82	Bhagulpore	•••	 Purneah	 Dis tric t	•	•••	***	,. .	57,4 58	89	1	409	68
8 3 84	Purneah English Bazar	•••	 Maldah 1	 District. 	•••	***	***	•••	15,016 12,480	155	1	220 278	27
85	Deoghur		l Pergun	nahs Die 	striot	•			8,005	48	******	74	. 88
86 87 86	Outtack Kendrapara Jajpore	,	Outtack L	***	***	 		:::	43,230 15,696 11,233	195 74 101	45 ï	171 178 145	76 87 96
89	Pouri	***	Poo ri D is alasore D		•••	•••	•••		24,784	693	56	374	224
90	Balasore	••• Ha	 saribagh	 District		•••	***		20,265	212	\$00207	79	86
99	Hazaribagh Kanohi		 hardugga 		 t.	***	***	**	15,806 18,443	86	1	240	61 25
93	Chybasea	•••	Si n gdhun	***	ıt. 	•••	***		6,006	19	200 040 200 040	95	94
94	Puralia		1 nèh um I 	ristrict.		•••	***		9,304	161	<u>≨</u>	154	87
	•			Total 1	for th	e Tow	723.69		2,198,840	7,918	658	88,781	6,689
			Total	FOR E	ED P	POVIN	CE		65,859,534	1,71,108	8,065	1,101,821	59,070

OFFICE OF THE SANY. COMME. FOR BENGAL,

The 24th May 1890.

Districts and Principal Towns of the Bengal Province during the year 1889-concluded.

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a		INJUR	Y.		1	Att	R.	tiq (OF DEAT	es pr	B. 1,000	OF POI	PULATI	OM.	
Bvio	IDE.	ag	d by		1	FROM		•		1			FROM	ALL SES.	
Mark.	Pemale.	Wounds or Accidents.	Snake-bite or killed Wild Besers,	Total.	All other causes.	TOTAL DRAFES CAURES.	Cholera.	Small-pox,	Fevers.	Bowel-complaints.	Injury.	All other causes.	For the year.	Mean of previous five years.	Number
			<u> </u>		<u> </u>					j		1			
a 	1 :::	72 8 13 17	4 7 8 8	83 16 16 19	622 256 156 178	2,563 620 824 651	2°01 °46 °78 3°85	*71 *40 *53 *12	5*71 8*78 10*18 11*05	8·14 1·59 ·99 4·19	*51 *83 *80 *80	8·88 5·22 2·98 7·58	15°98 16'74 15'77 27'57	25.02 30.02 15.28 36.02	61 61 61
	:::	28 2	10	88 2	88 9 178	8,218 8 07	6°06		21'79 24'51	*80 *61	•49 •80	12.97. 3.64	42.87 31.10	49*99 25*95	6.0
s	1 1 	24 9 6	1 2 1	29 13 7	" 123 " 13 09	725 504 486	*46 2:91 5:94	*82 *07 *45	10.60 16.31 10.60	1°79 4°14 1°81	*66 *67 *39	2·82 5·53 3·90	16:68 28:25 24:67	16:77 25:26 18:16	6
 	 8	55 8 9 11	5 1 2	60 8 10 15	271 34 122 83	890 197 826 431	1·19 4·08 1·63 2·08	.09 88.	7:58 10:97 6:57 8:8 4	4·21 4·24 6·69 8·28	1:40 1:30 • 62 •89	6°34 5°55 4°74 5°24	25.68 20.44 33.16 30.83	22°36 36°20 16°25 21°98	77
ed t		10_	4	14	461	۵,958	5.71	*24	14.85	3-05	-21	6-98	31:06	27-44	7
1 5 2	.:: :::	33 12 6	11 2 5	49 19 13	484 140 41	1,116 722 382	1°09 1°95 8°08	'81 '15 '48	6:30 7:20 13:69	8·13 2·93 4·08	*04 1*42 1*04	8:89 10:51 3:26	21'89 24'17 30'57	18:36 34:16 38:25	
		11	2	18	328	684	•28	*14	10°91	2-44	-61	15.42	39.81	84*00	,
·•• •••	 	87 8 6	•2 8 8	48 11 9	569 195 42	1,754 523 460	3:90 7:80 1:75	***	10°04 12°35 180°91	5·78 3·17 	*7 4 *80 *71	9:89 14:37 3:35	80'40 88'56 86'75	26°51 39°07 84°75	
48.		8	440	5	817	1,464	1.24	•01	8-69	-92	•08	14.53	25.48	87:97	
•••	•••	3	3	6	48	455	10.82	*06	14.65	1'79	-30	8.08	30.80	80.86	,
1		2	2	Б	38	390	2.73		21-96	8:21	•40	3.02	81'87	20.21	,
***		1		1	74	225	5. 37		0*24	4.12	.15	978	28710	21.73	,
***	 3 1	19 8 5	8 9 9	15 8 8	364 160 4	866 503 355	4.20 4.21 8.38	1°04 °08	3-9 5 11-02 12-90	1°78 8°54 8°54	*84 *51 *71	8'41 16'10 '85	20:02 04:98 81:60	17*86 25*99 18*60	
		18	. 4	20	509	1,772	23.76	2-25	15'09	9·03	*80	20-53	71:49	50.88	,
***	1	4	1	6	204	587	10.46		8.80	4.84	-88	10.08	28.88	26.74	(
3		38	•••	16	143	495	2.35	-06	15.68	8.88	-91	9'84	32:34	26'85	 -
1	-	11	9	, 14	114	519	12.23		7-81	1.82	75	8.18	28-14	17-51	. 1
200		6	1	å	81	168	1.96		15.81	8.89	199	516	,27.97	38.80	1
44.		11	1	19	69	461	19.46	*85	16'55	8'97	1.88	7·41 6/70	49'54 25'03	28'80	
96 195	2,016	15,796	214	1,100 80,784	14,709	1,597,478	8.61	118	16*79	.80	146	8:52	24'25	24.24	

W. H. GREGG, Dip. Publ. Health, Camb.,

ANNUAL FORM No. VII.—Deaths' registered from CHOLERA in the

1			3					8	,					'.		
							OF RE	CLES GISTNA- ON.	VILL							0 0
Number.	•	Disti	RICTS.				Number in each district.	Number from which deaths from Cholers, were reported.	Number in each district.	Number from which deaths from Cholers were reported.	January.	Pebruary.	March.	April.	Ky.	Jane.
	Bur	dwan	Divi	sion.												
123456	Burdwan Bankura Birbhum Midnaporo Hughli	***	•••	•••	*** *** ***		20 13 9 29 10 8	20 13 9 29	8,667 5,526 3,260 14,810 1,783	510 205 230 1,107 175 119	75 27 7 493 27 54	64 154 55 453 42 25	296 296 37 477 53	812 277 47 780 91 87	298 207 86 304 12 34	896 178 279 459 C4 43
	Serampore Total of H	 ugbli,	 inclu	 iding i	 Seram	 pore	18	18	2,707	294	81	67	64	128	46	87
7	Howrah	*	•••	***	•••		8	8	1,496	284	281	234	170	62	68	48
	Pres	ideno	y Div	ision.												
8 9 10 11	24-Pergunnahs Nuddes Jessore Murshedabad Khulna	***		•••	*** *** ***	 	38 31 29 28 15	83 81 22 24 24	5,485 8,129 4,836 3,561 2,890	785 781 908 696 783	401 826 648 273 381	853 109 168 249 1 164	465 200 202 985 518	289 824 536 1,822 589	288 767 885 671 886	248 555 337 878 880
	-	shahy	e Divi	ision.												
15 16 17 18 19	Dinajpur Rajshabye Rungpore Rogra Pubna Darjiling Julpaiguri	***	***		***	*** *** *** *** ***	17 14 17 10 11 4	16 14 16 10 11 8	6,921 5,159 6,737 4,229 8,763 695 1,153	181 288 102 76 227 60 183	17 205 84 9 75	9 1 5 5	9 18 341 6 56 24 109	177 817 824 35 247 60 243	161 223 47 23 79 109 518	48 67 8 18 29 78 181
	Da	ooa L	Pivisi o	766 ,												
20 21 22 23	Dacca Faridpore Backergani Mymensing	•••	***	***	***	••• ••• •••	14 34 17 18	14 14 17 17	6,625 4,669 4,836 15,719	1,089 945 1,618 511	423 434 682 257	202 207 910 207	574 967 8,910 216	1,584 2,409 2,551 1,274	589 626 1,120 1,440	63 138 558 555
	t	tagon	g Div	ision.	•								4.			
24 25 20	Chittagong Noakhali Tipperah	•••	•••	••• •••	•••	•••	14 10 18	10 10 13	1,390 2,628 4,481	91 325 736	40 63 480	24 61 872	82 846 791	79 405 1,122	40 291 487	25 165 185
	Pe	alna .	Divisi	ion.												
27 28 29 30 31 32 33	Patna Gya Shahabad Mozufferpore Durbhanga Sarun Chumparun		•••		### ##################################		17 14 14 18 11 18 10	16 14 14 13 11 13 10	5,960 6,300 5,574 4,281 6,869 4,578 7,760	402 554 260 200 193 238 95	8 10 9 5	8 8 1 1	11 59 59 5 3	50 132 97 11 44 83 15	75 128 18 87 85 196 172	183 967 189 76 177 191 67
	i	gulpo	D ic	rision.	•											
84 35 36 87 38	Monghyr Bhagulpore Purneah Maldah Sonthal Pergu	hnahs	***	•••	*** *** ***	*** *** *** ***	14 18 14 10 6	14 18 14 10 6	3,583 3,265 8,703 3,080 12,836	293 319 1,078 264 627	24 59 2	1 125 	7 164 6,198 17 54	7 817 10,284 284 318	149 404 625 356 351	208 165 66 98 284
	o	rissa	Divis	ios.									}			
89 40 41	Outtack Poori Balasore	•••	•••	***	***	***	18 6 10	13 6 10	10,009 5,166 6,393	2,819 8,031 2,301	28 13 120	58 10 240	118 211 350	876 1.887 1,917	9,708 4,846 8,649	4,231 6,896 4,199
40	Chota												·		1	
43 48 44 45	Mesaribagh Leharduggs Smebhom Manbuum	41. 41. 604	***	***	404 494 488	***	17 22 4 16	15 20 4 15	7,807 7,798 2,837 6,142	94 443 115 285	 10	 5 18	46 ₁ 48	28 28 275	80 49 65 198	107 365 18 289
		Toral:	for the	o prov	ince	***	645	631	284,369	26,548	5,909	4,646	18,429	88,008	28,720	23,971

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 24th May 1890.

Districts of the Bengal Province during each month of the year 1889.

							6		,	7		8	9
,							TOTAL.		RATIO OF	DEATRE:	PER 1,000 OK.	during	,
July.	August.	Beptember.	October.	November.	December.	Male.	Pemale,	Total.	Male	Female.	Total.	Mern ratio per 1.000 previous five years.	Namber.
1,081 558 439 213 43 40	338 96 807 116 39 16	55 22 46 36 26 30	5 24 6 21 44 52	88 2 12 114 39 160	33 4 94 405 81 233	1,787 874 845 2,081 281 1 483	1,643 773 765 1,820 230 312	8,430 1,647 1,608 8,871 511 735	2'67 1'72 2'21 1'64 -89 2'42	9:27 7:44 1:84 1:48 *66 1:75	2-46 1-58 1-03 1-53 -77 2-08	1°57 °91 1°97 1°52 1°18 1°78	1 9 3 4 5 6
83	55	56	98	199	814	704	542	1,248	1.43	1.03	1.55	1:39	
46	52	33	20	147	348	866	588	1,454	2.78	1.84	2.38	2.23	7
130 271 124 290 188	48 114 54 171 11	40 71 64 97 6	36 16 60 77 13	14 5 74 782 74 70	541 200 1,154 71 287	1,705 1,931 2,329 2,516 1,665	1,273 1,686 2,180 2,042 1,277	2,978 3,617 4,509 4,558 2,942	1°98 2°39 2°42 4°28 2°92	1°56 1°98 2°22 3°18 2°49	1-77 2-18 2-32 3-71 2-72	2:67 3:50 1:87 2:14 2:40	8 10 11 12
91 118 4 3 15 182 83	2 41 18 18 2 29 31	7 1 1 9 9 7	8 5 3 48 1	4 12 2 2 77	47 175 34 64 131	313 675 339 97 897 802 663	178 504 378 78 881 189 526	491 1,179 717 175 768 491 1,189	*40 1*02 *31 *26 *59 3:37 2*16	*24 *74 *36 *21 *57 2:85 1:90	*88 *88 *54 -23 *58 8*15 2*04	'66 2-67 1-43 1-69 1-87 -64 1-16	13 14 15 16 17 18
52 27 194 251	15 11 18 48	9 10 19 12	7 22 10 13	71 852 28 28	1,270 1,277 48G 47d	2,639 3,612 5,723 2,039	2,260 2,957 4.64 2,138	4,899 6,469 10,416 4,777	9:55 4:38 5:87 1:69	2:08 8:60 - 6:06 1:42	2:31 3:96 5:47 1:56	2'41 3'88 3'42 1'84	20 21 22 23
17 127 63	23 49 6	18 4	13	 6 20	52 165 493	188 974 2,272	208 717 1,752	396 1,691 4,034	-85 2:84 2:95	'34 1'76 2'34	3.08 3.08 3.08	1°84 °96 1°76	24 25 26
600 476 968 996 535 231 23	547 1,240 1,402 576 717 591 80	192 788 730 1,084 746 890 108	79 305 485 1,249 647 316 104	42 51 177 325 423 74 41	20 14 17 - 18 156 - 80 10	992 1,839 2,158 2,083 1,913 990 414	829 1,583 1,922 1,601 1,626 836 526	1,821 3,422 4,080 3,684 3,841 1,756 740	1°15 1°78 2°27 1°64 1°47 °64 °47	'92 1'46 1'89 1'21 1'21 '69	1'03 1'61 2'07 1'42 1'54 '76 '42	1.62 2.72 2.67 2.04 1.57 1.58 3.81	27 28 29 30 31 31 31
288 294 24 25 703	601 591 24 66 1,345	359 171 18 6 372	273 915 146 12 115	75 144 187 57 57	44 24 74 90 10	1,125 1,672 9,471 591 1,988	940 1,423 8,279 489 1,583	2,045 3,095 17,750 1,080 3,571	1°16 1°70 10°10 1°70 2°53	'91 1'44 9'08 1'84 2'02	1:03 1:57 9:60 1:53 2:23	1·75 1·53 -89 2·70 1·19	54 35 36 37 34
3,306 3,647 1,479	925 611 307	849 190 23	279 114 6	1,202 340 860	747 454 343	7,603 14,001 6,801	7,285 8,068 6,192	14,887 18,669 12,993	8:60 29:88 14:73	7:94 19:01 12:79	8°29 21°01 13'74	8.72 5-18 4-51	39 40 41
99 847 188 999	828 2,660 108 505	72 1,186 110 38	41 83 30 8	 2	::: ::: 1	413 2,729 268 1,037	377 2,491 241 8.58	790 5,213 509 1,915	75 8:41 1:18 2:01	*67 5*06 1*06 1*61	71 8:23 1:19 1:80	1'44 1'55 '50 1'57	42 48 44 45
29,187	14,654	7,563	6,080	5,821	10,181	92,027	79,076	171,103	5.81	5.38	2.59	912	-

W. H. GREGG, Dip. Publ. Health, Camb.,
Sanitary Commissioner for Bengal.

Annual Form No. VIII .- Deaths registered from SMALL-POX in the

1			3					8		•					-
*uhangun**						•	Crno Raeist	KES OF RATION.	VILI	ages.				é	t.
Number.		Dis	TRICT!	3. °	•	4	Number in each district.	Number from which deaths from Small-pox were reported.	Number in each district.	Number from which deaths from Small- pox were reported.	January.	February.	March,	April.	j j
	B	ırdwa	ın Div	ielon.											
1 2 3 4 5 6	Burdwan Bankura Birbhum Midnapore Hughli Serampore	*** *** *** ***	***	***	***	*** *** ***	20 12 9 29 10 8	8 19 2 17 7 6	8,067 5,526 3,260 14,810 1,783 924	27 218 10 152 11 8	5 21 12 	40 8	21 46 14 8	17 127 1 20 4 1	118 118 0 15 0 3
	Total of Hughl	i, incl	luding	Seran	pore	•••	18	13	2,707	19	<u></u>		8	- 5	- 8
7	Howrah	•••	•••	•••	•••	•••	8	7	1,496	21		1	2	8	
	Pre	sidon	cy Die	isio n.	ı								}		
8 9 10 11 12	94-Pergunnaha Nuddea Jessore Murshodabad Khulna		•••	*** *** ***	•••		33 81 99 28 15	10 7 6 3	5,485 8,120 4,836 8,661 2,890	59 14 5 3 5	1 2 	 	5 4 	2 5 3 	5. 4 ₁
	Raj	shahy	o Div	ision.											
18 14 15 16 17 18 19	Dinajpur Rajsitahyo Rungpore Bogga Pubna Darjiling Julpaiguri	•••		400 400 400 400 400 400	41 431 440 440 440 440		17 14 17 10 11 4	48 88 88 88 88	6,991 5,169 6,737 4,229 8,763 695 1,153	6 30 4 4 5 3	3	1 	1 3 	5 1 2 2 5 	 8 2
	D	acca.	Divisi	on.						İ					
20 21 22 23	Dacca Faridpore Backerganj Mymensing	•••	•••	•••	•••	•••	14 14 17 18	9 6 8 13	6,625 4,669 4,886 15,719	51 15 21 88	10 8 78	15 6 5 170	7 11 6 198	16 19 10 159	16 6
	Chi	itago	ıg Div	ision.									•		
24 25 26	Chittagong Neakhali Tipperah	•••	•••	***	•••	:	14 10 13	1 2	1,390 2,629 6,481	5 5 57	 -43	 30	29 	 48	 43
67	Patna	atna	Divisi 	on.			17	17	5,960	237	87	86	86	82	Ωù
27 28 29 80 81 82 83	Gya Shahabad Mozufferporo Durbhanga Sarun Chumparun	₩.	***	***	•••		14 14 13 11 13 10	13 14 12 11 13 10	6,800 5,574 4,281 6,359 4,578 7,766	200 273 57 131 251 559	24 43 4 6 26 76	28 134 13 85 84 82	46 164 29 41 25 77	57 174 59 74 56 242	99 47 108 61 51 102 281
		ulpor	• Divi	sion.								ļ			
34 35 36 37 38	Monghyr Bhagulpore Purnesh Maldah Sonthal Pergur	mahs		906 908 904 400	•••		14 13 14 10 6	7 7 5 8	3,583 3,265 3,708 8,080 12,336	19 21 7 	18 	20 %	"is 5 "·1	\$1 9	10 20 1
		rissa.	Divisi	O16.		1						.			
#0 #3	Cuttack Poori Belasore	•••	***	***	•••		13 6 10	12 6 9	10,069 5,166 6,893	111 436 147	8 90 58	27 84 48	101 85	40 184 18	779
ı	Chota	Nagp	ore De	vision	١.					,		,	1		
42 43 44 45	Hezaribagh Loherduges Sinchlum Manhhum	•••	***	*** *** ***	•••		17 23 4 16	11 5 2 18	7,807 7,798 2,337 6,142	28 68 9 "	10	19	ïs	9 8 1	* 11 85
	Total		THE .	PROVI	nçe	w.	645	819	234,369	8,604	596	881	981	1,470	1,945

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 24th May 1860.

Districts of the Bengal Province during each month of the year 1889.

,	•	5						T	8			7		8		9	10
	5	•							TOTA	L, ,	THESE	BER OF DEATRS G CHIL- EN.	TOTAL OF I	RATIO PI POPULAT	ER 1,000	f previous	
	June.	July.	August,	September,	October,	November.	December,	Male.	Pemale,	Total.	Under one year.	Under twelye years.	Male.	Female.	Total,	Mean ratio per 1,000 of five years.	Number
	7 81 13 6.,	3 59 "18 "2	1 23 12 3	18 11 	6 1 14 1	15	60 2 5	34 804 1 114 9 5	26 232 1 98 10 6	60 536, 2 212 19 11	8 50 15 1	26 162 48 8 8	*05 *59 *002 09 *09 *62	*03 *48 *009 *07 *02 *03	*04 *51 *002 *08 *02 *03	*06 *09 *01 *08 *08 *08	198456
ŀ	- 6	2	8		1		7	14	16	- 80				-03	-08	.03	
	1	8	1	***	1	8	4	21	12	83	5	11	*06	-03	*05	*04	7
	8 1 1 	9 1 	9. 6 	1 		8 	28 	\$3 14 2 1 8	30 4 6 1 6	63 16 8 2	3 1 1	1 7 4 1	*03 *01 *602 *001 *005	*03 *004 *006 *001 *01	*08 *01 *0#4 *001 *008	*02 *04 *004 *02 *004	8 9 10 11 12
	 1	 1 1	 1 	012 401 400 200 200 200	**** **** *** *** ***	008 000 000 000 000 000 141	1	2 1 0 2 3 4 1	© 8 F 8 F 8 F	8 4 7 4 6	***	8 3 1	*002 *001 *005 *005 *004 *04 *04	*008 *004 *0009 *005 *001 *03 *01	*005 *002 *003 *005 *005 *03 *03	*01 *03 *01 *008 *00× *08 *005	13 14 15 16 17 18 19
	7 2 3 -40	3 4 3 58	2 5 30	9 4 24	3 1 	5 3 13	3 11 	46 46 25 479	85 85 7 447	\$1 81 32 926	14 9 185	8 744	*04 *05 *02 *30	*08 *04 *007 *29	*03 *04 *01 *30	*09 *03 *04 *05	20 21 12 23
	 ****	***	 	 	"'ı 	₁	₃	1 114	1 1 90	2 5 204	1 ₈₁	767 5 7691	*001 *009 *14	-12 -2002 -1001	*001 *006 *18	*0008 *16 *05	24 25 26
	120 82 53 27 10 80 88	77 29 35 8 7 44 344	83 17 10 8 1 27	11 25 6 22 6 13 36	8 9 6 3 1 6 21	6 16 24 1 11 23	19 23 32 4 5 11 59	291 182 397 106 110 235 811	276 171 387 95 128 196 768	567 953 784 201 258 431 1,579	125 75 203 53 67 129 595	458 297 685 154 169 420 1,677	*33 *17 *41 *08 *08 *21 *93	*30 *15 *39 *07 *16 *16	*32 *16 *59 *07 *09 *18 *91	*34 *48 *14 *09 *04 *35 *80	27 29 29 30 31 33 33
	17 	7 18	3 11 8	389 20 	7 1	8 8 	 8	205 89 6	\$17 83 2 15	422 172 8	17 80 1	84 162 	*21 *69 *006 *02	.01 .08 .003	* 21 *08 *004 ******************************	*17 *14 *01 *007 *06	34 35 36 37 38
	15 50 1	50 51 4	11 81 6	58 	9 25 4	 86	13 99 5	124 445 92	88 418 90	212 803 183	46 152 53	212 51 a 124	*14 *99 *19	.09 .09	-11 -67 -19	*87 *25 *34	39 40 41
		is	7 1 0	, s	10 	"s	9 1 22	29 35 1 113	\$0 10 1 75	49 85 2 188	 22	.:: .:: 63	.05 .08 .004 .21	• '03 '01 '004 '14	104 108 1004 117	*90 *08 *01 *01	42 43 44 45
	100	706	876	613	1.61	196	471	4,559	4,106	8,665	1,941	2,180	.19	13	78 .	.13	

W. H. GREGG, Dip. Publ. Health, Camb,

Sanitary Commissioner for Bengal.

Annual Form No. IX. - Deaths registered from FEVERS in

1			2						8 .		4					*
		19-7-19-7-19					٠	CIRCI REGI	ES OF STRA- ON.	VILL	AGES.				•	•
a dimera.		:	Distric	orę.				Number in each District.	Number from which deaths from Fever were reported.	Number in each District.	Number from which deaths from fever were reported.	January.	February.	March.	April, ",	May.
-								2	×, T	2"	Z	-3	<u> </u>	7	¥	26
1 2 3 4 5	Burdwag Bankura Birbhum Midnepore Hughli Serampore	d 44		ivision	*** *** *** *** ***		•••	20 13 9 29 10 8	90 13 9 29 10 8	3,667 5,526 8,260 14,810 1,783 924	3,129 8,515 2,511 10,248 1,588 874	1,876 1,288 1,197 3,642 1,017 418	1,714 1,028 1,057 2,966 848 816	1,777 1,193 1,063 8,131 845 810	9,087 1,450 1,868 3,638 866 406	1,46 1,15 88 2,52 00
	Total	of Hug	hli incl	uding !	Seram	pore		18	18	2,707	2,462	1,430	1,164	1,155	1,272	90
,	Howrah						•••	8	8	1,496	1,260	537	467	529	544	40
		Presi	idency l	Divisio	n.		i									
8 9 0 1 2	24-Fergunnal Nuidea Jessore Murshedabsd Khuina	: : <u>:</u>		***	•••		•••	88 81 98 96 5	33 81 22 28 15	5,485 8,129 4,836 8,561 2,890	4,433 2,856 4,186 3,291 2,331	1,998 2,418 4,140 9,057 1,904	1,624 1,778 2,682 1,501 1,216	1,671 1,644 2,671 1,906 1,877	1,836 2,776 3,676 2,568 1,580	1,21 1,84 2,42 1,61 1,03
		Rajsh	ahye D	ivision	1.											
3 4 5 6 7 8	Dinajpur Rajshahye Rungpore Bogra Pubna Darjiling Julpaiguri			12		•••	•••	17 14 17 10 11 4	17 14 17 10 11 4	6,921 5,159 6,787 4,239 8,763 695 1,153	6,074 4,834 6,359 8,185 8,256 504 1,032	3,483 2,724 4,946 1,362 2,588 235 1,409	2,976 1,997 4,120 1,024 1,763 206 1,100	8,228 2,248 4,006 1,012 1,819 258 1,111	3,792 3,628 8,859 1,400 2,764 386 1,827	2,49 2,11 8,10 8 1,80 1,80
		Da	coa Dir	iston.												
0 1 2 3		• •				 	•••	14 14 17 18	14 14 17 18	6,425 4,689 4,386 15,719	5,527 8,271 2,688 3,695	9,828 2,240 2,789 4,322	2,036 1,503 1,993 3,319	2,189 1,728 2,228 2,858	2,978 2,218 2,570 3,858	1,61 1,35 1,74 2,96
		Chitte	agong I	Divisio	n.				ļ							
4 5 6	(Dimmonth	·· ··		•• •••	•••	••• •	•••	14 10 18	14 10 13	1,390 2,628 6,481	1,066 1,979 4,663	1,991 1,961 3, 070	1,569 1,486 1,668	1,872 1,672 1,606	1,449 2,120 1,879	1,18 1,56 1,66
		Pa	itna Di	vision.	•											
7 8 9 0 1 2 3	Gya Shaliabad Mosufferpore Durbhanga .			•••			•••	17 14 14 13 11 13 10	17 14 14 18 11 13 10	5,060 6,300 5,574 4,261 6,350 4,578 7,706	4,617 5,021 5,047 3,871 2,528 2,185 2,851	1,638 2,912 2,883 2,108 2,390 1,110 1,469	1,205 1,879 1,763 1,694 2,053 950 990	1,147 1,986 1,669 1,579 2,096 1,105 1,023	1,805 2,839 2,199 2,206 2,821 1,945 1,688	1,50 8,21 2,11 1,70 9,60 1,50
4 5 6 7 8	Monghyr Bhagulpore . Purnesh Maldah Sonthal Perg			Divisio	•••	***	***	14 13 14 10 6	14 13 14 10 6	3,583 8,265 3,743 3,080 12,336	8,075 8,040 8,592 2,470 6,370	9,859 9,863 4,159 1,496 1,849	9,150 8,176 8,272 919 1,225	9,199 2,235 3,254 974 1,159	3,262 3,958 4,700 1,842 1,906	2,4/ 2,8/ 3,0/ 1,1/ 1,5/
			issa Dit	vision.) 						.,	,,,,,,	
h. Pr	Poori	 	• •••	***	•••	••• •••	•••	18 6 10	13 6 10	10,069 5,166 6,893	5,620 1,962 8,435	1,718 830 948	947 186 595	1,259 206 542	1,486 178 781	1,08 17 46
	Ł		Nagpor	e Divi	sion.						•	_	•			•
18 14 15	Hazaribagh Lohardugga Singbhum Manbhum	•• •×		***	*** *** ***	000 000 000	***	17 22 4 16	17 22 4 16	7,807 7,798 2,387 6,142	5,298 4,785 1,017 4,845	1,976 1,818 465 1,018	1,248 1,296 486 912	1,854 1,410 623 1,198	1,891 1,896 641 1,527	-1,58 1,48 51 1,26
		To	TAL FO	e tue	Prov	INCE	•••	645	645	234,369	149,568	92,981	69,848	72,888	97,284	70,20

OFFICE OF THE SANY. COMME. FOR BENGAL,

The 24th May 1890.

e Districts of the Bengal Province during each month of the year 1889.

	****		1					6	. 1		7		8	9
								Total.		PEI	OF DEA	12	o during	
June	July.	August.	September.	October,	November,	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 c previous five y cars.	Number.
1,390 983 821 2,405 505 252	1,883 1,825 1,177 3,361 741 388	1,841 1,257 1,205 3,239 844 480	1,976 1,294 1,189 5,706 1,085	2,136 1,155 1,811 8,721 1,162 608	2,253 1.100 1,269 4,084 1,440 838	2,527 1,820 1,445 5,167 1,553 1,044	11,831 7,820 7,083 21,585 5,928 2,950	11,030 6,481 6,918 19,997 5,586 2,808	22,841 14,501 14,001 41,582 11,514 5,758	17:70 18:41 18:56 17:36 18:77 16:91	18-24 12-49 16-75 15-71 16-08 15-81	16·42 13·91 17·62 16·52 17·36 10·38	16'50 12'74 17'91 15'38 15'84 11'82	1 2 3 4 5
757	1,079	1,274	1,597	1,770	2,278	2,596	8,878	8,304	17,278	18.11	15.88	17:01	14:45	
335	499	520	621	625	791	1,088	3,819	3,125	6,914	12.06	9'79	10.85	9.68	7
1,168 1,561 2,205 1,340 941	1,599 1,924 2,858 1,915 1,447	1,687 1,811 2,450 1,631 1,254	2,147 1,981 3,035 2,025 1,619	2,016 2,648 8,917 2,357 1,749	2,434 2,386 4,928 2,136 2,279	3,504 2,988 6,590 2,264 2,841	12,581 14,173 22,567 12,443 9,855	10,313 11,777 19,223 10,870 9,383	22,894 25,950 41,590 23,313 19,238	14:61 17:58 23:31 21:21 17:33	12:69 13:85 19:61 16:97 18:34	13.08 15.07 21.44 19.00 17.81	14:13 98:53 19:56 20:54 18:09	8 9 10 11 12
3,231 1,550 2,959 716 1,893 309 1,215	2,274 1,948 8,017 947 1,653 264 1,850	2,088 1,726 2,726 799 1,201 850 1,042	2,910 2,162 2,583 1,010 1,934 306 1,090	3,270 3,091 8,780 1,310 2,644 294 1,427	4,018 3,240 4,670 1,282 2,418 270 1,617	6,230 4,218 6,991 2,236 3,509 336 2,263	21,039 14,209 25,422 7,416 14,385 2,047 9,127	17,950 14,264 20,848 6,687 11,214 1,522 7,869	38,989 80,473 46,310 14,103 85,579 3,569 16,998	26:89 24:53 23:82 19:92 22:11 22:90 29:82	24.52 21.01 20.28 18.51 16.94 22.95 28.46	25.74 22.74 22.07 19.22 19.50 22.93 29.18	23·13 26·65 23·52 22·32 25·16 15·67 26·42	18 14 18 10 17 18
1,368 1,093 1,560 2,722	1,736 1,446 1,970 8,989	1,895 997 1,558 2,649	1,976 1,391 2,037 3,199	2,470 2,205 3,005 8,866	2,814) 2,702 4,026 4,084	3,988 3,545 5,474 6,093	14,790 12,368 16,711 24,420	12,685 10,032 14,545 19,488	27,475 22,390 30,558 43,908	14°80 15°44 16'65 15'09	11.71 12.21 15.46 12.98	12:98 13:72 16:07 14:36	13·18 11·48 15·88 11·64	20 21 21
1,086 1,441 1,886	1,626 1,951 2,077	1,480 1,329 1,568	1,802 1,297 1,671	1,870 1,357 1,807	1,850 1,919 2,197	2.613 8,056 8,256	10,103 10,571 12,205	9,706 10,583 10,592	19,809 21,164 22,797	19:00 25:45 15:88	16:15 26:09 14:20	17:40 25:77 15:05	12 ⁻ 18 17 ⁻ 87 11 ⁻ 72	2 2 2
1,658 2,401 2,347 1,543 2,234 1,433 1,125	8,519 4,173 8,547 2,488 5,132 2,197 1,473	3,768 5,216 4,044 3,594 3,462 2,047 1,414	8,716 5,747 5,278 8,121 3,969 2,167 1,575	8,810 6,467 5,473 3,987 5,042 2,375 2,136	\$,047 5,100 4,589 8,388 4,005 1,951 2,602	2,876 4,348 3,993 8,508 5,896 1,725 2,969	15,888 23,117 21,332 10,674 20,480 11,860 10,914	14,952 22,174 18,870 18,857 17,178 8,728 8,818	29,740 45,291 40,202 30,031 37,664 20,883 19,732	17:96 22:15 22:44 13:17 15:80 10:92 12:53	16'03 20'50 18'59 10'14 12'84 7'27 10'36	16'97 21'31 20'45 11'63 14'30 9'06 11'46	15'08 20'71 20 49 9'34 10'81 8'13 13'48	2 4 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
2,405 2,360 2,201 858 1,336	4,583 8,611 2,488 1,095 2,337	4,109 3,350 1,970 690 2,398	5,687 4,162 1,922 843 2,114	7,366 5,113 3,453 1,947 1,959	5,833 4,349 8,122 1,435 1,615	5,437 4,166 4,659 1,843 1,772	25,051 21,741 21,205 8,447 11,810	23,288 19,424 16,831 6,616 8,896	48,339 41,165 38,034 15,063 20,706	25·84 22·20 22·69 24·34 15·03	, 29:27 19:67 18:46 18:80 11:86	24 54 20°93 20°59 21°20 18°20	22:00 20:31 18:90 20:21 12:36	3 3 3
981 158 460	1,805 196 752	1,623 209 795	1,765 229 1,028	2,066 384 1,065	2,683 496 1,293	3,797 816 1,840	10,084 1,780 5,177	10,577 1,663 5,331	20,661 3,448 10,508	11:48 8:98 11:21	11:52 3:76 11:01	11.20 3.87 11.11	8·81 3·20 8·67	344
1,470 1,348 495 1,147	2,149 1,831 515 1,686	2,348 1,990 869 1,580	2,829 3,541 518 1,454	5:547 3:223 407 1,337	2,245 1,776 461 1,076	2,091 1,793 510 1, 39 5	12,020 11,635 3,450 8,334	11,009 9,789 2,776 7,091	23,029 21,364 6,226 16,425	22:05 14:60 15:21 15:86	a19:66 11:97 12:22 13:30	90·84 13·27 18·69 14·57	18*80 13*81 13*43 11*86	4
62,670	88,812	83,149	96,784	114,086	<u> </u>	189,537	580,252	512,260	1,101981	18:03	15'43	16.79	15'87	1

W. H. GREGG, Dip. Publ. Health, Camb,

Sanitary Commissioner for Bengal.

Annual Form No. X .- Deaths registered from BOWEL-COMPLAINTS

1				8						8		•	.	_	<u>.</u>		
									CIRC	LES OF	. VI	LLAGES.					1
Number.	c		D) istel	CTB.	•			Number in each District,	Number from which deaths from Bowel-complaints were	- - -	Number from which deaths from Bowel- complaints were	January.	February.	March.	April.	Key,
\			Burdy	oan D	inisto	n.								1			
1 2 3 4 5	Burdwan Hankura Birbhum Midnapore Hughli Serampore	***	*** *** *** ***	*** *** *** ***		***		 	20 13 9 29 10 8	20 11 20 10	5,526 3,266 14,816 1,78	8 870 92 0 1,407 3 624	201 201	276 120	08 11 192 100	907	87 66 7 151 68 45
	Tota	al of	Hughl	i, incl	uding	Seran	apore	•••	18	6, 16	2,70	7 961	305	197	174	186	113
7	Howrah	***	••	•••	•••	•••	•••	***	8		1,490	827	287	918	194	175	188
			resido	nay 1	Divi s i) 18.											
8 10 11 12	24-Pergu ni Nuddea Jessore Murchedab Khulna	***	***	•••	•••	•••	•••	•••	88 91 22 28 15	83 80 19 20 15	8.129	154 130 108	175 94 92 81 41	111 16 10 28 19	84 11 27	116 81 17 29 21	77 24 10 26 81
		R	a jsh ah	ys D	เขใชเดา	n,								l			
18 14 16 16 17 18 19	Dinajpur Rajshahye Rungpore Bogra Pubna Darjiling Julpaiguri	•••		107 101 110 100 100	000 000 000 000 000 000	*** *** *** *** *** ***			17 14 17 10 11 4	14 12 17 10 10 4	5,159 6,737 4,229 3,763	62 119 86 125 155	7 9 11 4 19 33 8	16 1 8 1 6 29	10 4 10 1 14 84	14 6 9 4 22 59 5	9 8 20 9 30 144
			Dacca	Dini													Ì
20 21 22 23	Dacca Faridpore Backerganj Mymenaing	•••	•••	***	001 000 000 000	***	•••	:::	14 14 17 18	14 14 17 18	6,625 4,669 4,336 15,719	835 262 316 176	191 53 65 94	189 45 49 69	187 52 59 43	191 60 66 70	146 44 82 72
		C	hittag	ong L	ivisio	и.					į						
24 25 26	Chittagong Noakhali Tipperah	•••	•••	•••	•••	···	•••	 	14 10 †3	14 10 13	1,390 2,628 6,481	844 209 583	140 46 113	94 24 78	63 61 90	77 92 181	89 45 94
			Patno	2 Divi	ision.			ĺ									
27 28 29 30 31 30 35	Patna Gya Mhahabad Mozulferpor Durbhauga Sarun Chumparun	***	*** *** * . *** *** ***	***	***				17 14 14 13 11 13 10	17 14 14 13 11 13 10	5,960 6,300 5,574 4,281 6,359 4,578 7,766	1,065 284 210 444 483 1,075 201	187 86 50 105 108 215 6	108 20 54 79 97 845 28	105 36 54 91 116 304	190 49 54 95 113 354 19	913 87 84 114 199 286 83
		_e Bh	agu lpo	re Di	vision	٠.											
34 85 86 37 39	Monghyr Bhagulpore Purneah Maldah Sonthal Perg	unn	aha	 	*** *** ***				14 18 14 10 6	13 13 11 7 6	3,593 3,265 3,703 3,480 12,886	215 285 63 82 245	80 86 7 10 20	20 28 12 1 21	82 17 82 19 \$8	59 86 86 9 46	88 65 19 8 40
			Orissa														
40 41	Cuttack Poori Salasore	000 000 447	***	***	***	***	•••	:::	18 6 10	13 6 10	10,069 5,166 6,398	2,498 1,571 2,828	869 194 544	230 164 348	275 160 646	890 119 406	291 125 326
ĺ		Chot	a Nag	pore .	Divisi	on.						•					
49 48 44 45	Hazaribagh Lohardugga Singbhum Manbhum	- 4 R - 80 - 60 - 60 - 60 - 60 - 60 - 60 - 60 - 6	44 440 ***	@ *** ***	***	*** *** ***	***	:::	17 \$1 4 16	17 22 4 16	7,807 7,798 2,387 6,142		184 44 87	90 127 85 85	165 40 100	78 974 89 98	63 562 71 109
	-		TOTAL	L POB	TRE]	Provi	nce		645	625	234,369	98,420	4,200	8,207	9,495	4,501	3,076

Office of the Sany. Commr. for Bengal, The 24th May 1890.

in the Districts of the Bengal Provinces during each month of the year 1889.

5	,	,						6			7		8	. 8
ı	•							Ţotal.		BATI Pi Po	O OF DE ER 1,000 C	ATES OF	dering.	
June	July.	August.	September,	October.	November.	December.	Nale.	Pemale.	Total,	Male.	Female.	Total.	Mean ratio per 1,806 provious five years.	Number.
82 62 13 179 90 55	129 84 16 275 107 101	112 79 9 813 135 111	81 57 6 263 160 129	66 83 4 249 155 152	69 88 5 289 159 165	90 84 10 838 176 197	565 424 78 1,720 786 667	847 268 47 1,153 725 629	812 692 125 2,873 1,511 1,296	*84 *88 *20 1*39 2*48 3*82	*47 *50 *11 *90 2:08 8:54	*65 66 *15 1*14 8*27 8*68	*46 *49 *19 1*48 2*13 2*86	1 2 8 4 5 6
135	208	246	289	807	894	878	2,453	1,854	2,807	5.86	2.22	2.76	2:38	
145	172	218	941	239	264	408	1,961	1,329	2,689	4.30	4'18	4-28	4.04	7
74 20 19 30 19	119 10 29 98 21	158 23 17 49 17	175 15 8 29 13	125 20 14 22 21	153 16 20 14 14	242 85 40 21 34	916 151 112 196 140	735 126 105 122 117	1,651 277 217 518 257	1.06 *18 *11 *33 *24	*90 *14 *10 *19 *22	*98 *16 *11 *25 *23	• 02 • 23 • 09 • 30 • 26	8 9 10 11 12
8 12 13 6 10 138	18 5 20 3 6 158 5	4 1 6 8 4 75 6	11 8 11 6 12 51 11	8 18 4 8 17 45 18	8 20 16 1 9 32 18	13 80 16 12 25 89 13	80 77 90 83 104 429 62	41 40 48 20 70 840 54	121 117 138 52 174 769 110	10 11 08 08 16 4.60	.05 .05 .04 .05 .10 5.12 .19	*07 *08 *06 *07 *13 4*94 *19	117 111 118 111 125 4114 118	18 14 15 16 17 18 19
126 41 80 91	121 27 40 52	122 17 28 59	163 28 29 42	282 46 86 77	274 64 63 64	863 * 73 121 108	1,186 801 839 808	1,022 249 288 332	2,208 550 627 840	1°14 °87 °84 °32	*94 *30 *81 *22	1'04 '33 '32 '27	1°36 °36 °38 °49	20 21 22 23
63 51 61	73 27 66	64 16 34	68 10 40	51 16 40	91 17 58	144 40 90	546 234 524	471 211 372	1,017 445 896	1:02 '26 '68	*78 *52 *40	*89 *84 *89	·67 ·49 ·01	24 25 26
161 51 54 111 77 203 87	825 76 03 147 128 260 29	876 91 73 141 107 278 82	301 100 88 181 186 830 41	287 53 67 148 179 371 41	200 42 55 167 149 807 22	201 30 35 196 196 240	1,439 895 416 820 823 1,858	1,185 226 265 645 627 1,500 120	2,624 621 681 1,465 1,440 3,358 812	1.68 -37 -43 -64 -65 1.71 -22	1.82 .20 .26 .48 .46 1.25	1:49 -29 -34 -56 -55 1:46 -18	2:02 *52 *38 *67 *90 1:63	27 28 29 30 31 52 53
46 80 5 4 84	109 70 13 5 65	100 61 7 5 5	86 87 7 5 39	71 113 11 4 48	54 54 5 8 8	49 58 14 2 26	408 437 68 51 290	281 258 70 20 100	689 695 148 71 45 0	*49 *44 *10 *14 *86	*28 *26 *07 *05 *20	*84# *35 *09 *09 *28	*40 *79 *11 *06 *81	84 85 86 87 88
820 148 886	565 251 600	579 308 645	499 818 676	481 244 488	892 286 562	588 819 697	2,006 1,547 3,527	1,931 1,158 3 ,553	4,897 2,705 5,879	8:37 8:40 7:20	2°10 2°04 5°27	2·72 3·04 6·21	2°22 2°86 4°89	39 40 41
57 378 78 120	80 860 108 195	100 575 80 168	84 562 67 104	C#* 803 89 87	38 108 18 77	47 113 27 67	485 9,003 404 812	243 1,553 287 440	678 8,556 641 1,252	.79 2.61 1.78 1.54	1.91 1.04 1.82	*61 2:20 1:41 1:18	*87 1*58 1*78 *94	42. 43. 44. 45.
8,716	8,319	5,385	5,201	4,774	6,451	5,581	30,348	92,781	58,075	.88	*68	-80	-84	

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

APPENDIX No. II.

STATEMENT AND MAP ILLUSTRATING THE DISTRIBUTION OF CHOLERA IN BENGAL,

DURING THE YEAR 1889.

App. II.]

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1889.

1	2	3	4	4.5	6	7	8		1	0
	of mortuary shown on the		rcles.	Cholers in	Cholers in he year,	Cholers in		in ench g	Numb	6B
Districts.	Number of circles of registration as sho	NAMES OF CIRCLES.	Population of the circles	Date of first case of Cholers in the circle during the year.	Date of last case of Cholora the circle during the year.	Total deaths from Cholers the circle during the year,	PERIOD OF MAXIMUM INTERSETY OF THE DISTAGE AG REPRESENTED BY MOBTALITY.	Number of vill ages the circles.	Affected by Cholern.	Not affected by Cho- lora.
	[1	Burdwan T.	84,080	January 1889	December 1889	93	February to April, June, July, November and	1	1	
	3 4	Kalna ,, Raniganj R. Č.	10,901 10,937 27,330	Ditto February Ditto	October September July	16 137 28	December, January, February, April to July and October. February to September July	105	1 1 6	 "io1
	6	Royna ,,	71,709 97,190	April January	December Ditto	63 22	Very slight January, March and September.	228 266	12	258 254
	8 9	Khandghose , (Gangoor ,)	54.991 102,748 75,171	January March	Ditto	110 297	March and July! March, April, July and August. June to September	146 878 166	7 12 61	133 361 105
Burdwan	10	Bood-Bood	79,073 97,311	February	Ditto	239	March, July, August and November. June and July	209 232	13 35	196
	12 13 14 14	Kalna ,, Purbuschali ,, Montessur ,, Cutwa ,,	81,588 82,070 63,053 82,948	Muy March January Ditto	June September August September	24 148 152 776	April to August February to August January and March to	266 251 163 167	5 19 28 100	261 232 160 58
	16	Katugram ,	73,723 73,543	Ditto	November September	445	August, January, April and June to August, March and May to Sep-	179 182	108 53	71 129
	19	Raniganj ,,	1 35,646 54,089	February Ditto	August July	225 60	tember. February and April to July. February to April and	290 111	2 96 5	264 106
<u>.</u>	20	Assensole ,,	99,842 1,391,823	March	September	3,430	May and July	810	10 510	300
	21 22	Bankura T. Bissenpora ,	17,805 18,868	March January	September July	79 41	March to August February to May and July	· 1	1 1	3,157
	23 24 25	Sonamukhi R. C. Gangajalghati ,,	5,590 109,656 172,607	February January	December November	115 452	January, March and June to October, April, May and July February and April to	727 755	1 83 62	694 698
Baukura	26 27 28 29	Anda	110,321 99,122 95,802 32,682	February March February	October May July August	124 93 146 132	August. Marck, April and July March to May Ditto February to May and	760 843 679 283	40 18 15 18	720 827 664 270
	30	Bissenpore ,,	122,015 74,426	Jaruary	Ditto	184	February to April and June to August, May to August	511 262	19	492
	32	Indus ,,	78,809 94,964	Fourthry	December Soptember	75 87	February to April and October. January to April	231 463	15 19	216
		District Total	1,041,752	January	December	1,647	February to August	5,526	265	5,261
	84 86 86 87 88	Soori T. Do R. C. Dubrajpur Bolpur	7,848 118,891 126,646 107,893 48,743	April March April Ditto January	May November Septomber Ditto December	6 179 38 263 722	April and May June to August August and September June to August Pebruary to April, June to September and De-	1 642 465 436 220	1 42 6 19 95	606 459 417 128
Birbhum	30 40	Labper Kampurhat	83,457 87,774	Ditto February	October Decomber	111 137	to Soptember and December. June to August February, November and December. April, June, July and December.	279 291	\$2 19	25 27
	41 42	Moureswar ',,	79,359 1 5 8,897	Ditto January	Ditto	89 63	and December. April, June, July and December. May and June	408 580	17 16	386 514
		District Total	794,428	January	December	1,608	June to August and De- comber.	3,260	280	8,080
•	43	Midnapore T.	8 3,560 12,638	January	December Ditto	34 19	January and March to May. January, February, May.	1	1	
	45 40	Chundrakona "	12,257 10,909	Ditto	Ditto		January, February, May, July, August and De- cember. March to. May January to April, June and September.	1	1	th
	47 48 40	Midnapore B. C. Biupur Danton	128,546 90,704 128,447	Ditto Ditto Ditto	December July	226 256 247	Signification of Vibrat	1,840 778 620	48 53 110	1, 29 78 50
Midnapore	11	Debra Garbetta	70,126 135,786	Ditto Ditto	Ditto	72 846	March to July January, February, April, June, July, No- vember and December. January to March February to June and December.	708 1,006	28 64	870
	52 53	Gopiballavpur Jhargram	139,928 59,762	March Do	Ditto May	88 5		1,979 607 905	15	1,25
	54 55 56	Narainghur ,	98,609 190.199 83,617	January March	December Ditto	29 147 63	Slight February to May January and March to June Mey, July and August January, March and April	1,017	66 51	901 901
!	67	Sabong,	201,774	January	Ditto	212	January, March and April	745	2	674

1	<u> . • </u>	3	4	5	,6		7	. 8	9	1	0
	Bortuary		4	bolers in	Cholers in		olera in year.	•	each of	NUMB THO	19 —
Districts.	Number of circles of mortuary	NAMES OF CIRCLES.	Population of the circles	Date of first case of Cholers, the circle during the year,	Date of last case of Cholera the circle during the year.		Total deaths from Cholera the circle during the year	*PREIOD OF MAXIMUM INTERSITY OF THE DISEASE AS ESPRESSITED BY MORTALITY.	Number of villages in the circles.	Affected by Cholera.	Not affected by Cho-
	56	Uhandrakona "	71,455 64,805 115,269	January 1889 Ditto	September December	1889	126 226	January to July January to May	839 410	1 6 70	32: 340
	61		80,049	Ditto	Ditto .		115 149	January, February and April. January to March, July	406 971	50 17	35 25
	65	1	80,569	Ditto	Ditto		133	and December. January, February, June	252	44	20
	65	1	121,895	Ditto	Ditto		170	and December. January to March, August and December.	252	48	20
Widonwoon	64	1	142,081	Ditto	Ditto	•••	159	January to March, May to July and December.	648	62	58
Midnapore— concld.	1 6	Sutahatta ,,	54,624	Ditto	Ditto	***	160	January, February, May to August and Decem-	247	40	20
ı	66	,,	180,554	Ditto	Ditto	•••	401	ber. January, February, May to July, November and December.	740	101	63
	67	Bgra	63,417 87,324	Ditto	Ditto Ditto	***	54 74	January, June and December.	376 456	27	84
	66	1	62,124	Ditto	Ditto	•••	98	February, April and December. January to March, May	395	48	48 86
	70	Bhagawanpur ,,	96,451	Ditto	Ditto	•••	141	to July and December. January to March, May.	400	82	86
	71	Khajri ,,	42,126	Ditto	Ditto	•••	57	July and December. January to March and December.	183	15	11
		District Total	2,515,565	January	December		5,671	January to June and December.	14,810	1,107	18,70
	75	Jehanabad ,,	81,687 10,507	January Ditto	December July	:::	90 11	January to December January, February, April, May and July.	101 17	48 5	1
	74		48,218 43,924	June March	December Ditto		39 40	July and December March, April, July and	159 188	8 11	11
Hughli	76		24,758	January	November		24	January, June and	70	8	٠,
•	1 76	Dhaniakhali, Pandua ,	93,537 66,113	February January	December October	•••	24 43	August to October. Slight February, April, July	886	13	87
•	75	1	99,905	Ditto	Decemb er	•••	78	and October. January, March, Novem-	187 208	13 27	17
	81		188,300 111,121	Ditto Ditto	Ditto Ditto	•••	48 105	and December. November and December March, April and December.	228 274	15 82	20 24
	ر	District Total	663,050	January	December	•••	611	April and December	1,783	175	1,60
	82	Serampore T. Baidobatty ,.	26,496 14,715	January Ditto	December Ditto	:::	213 49	January to December January, March, June, July and September to December,	7 11	7 7	
	84	Utterpara ,,	5,510	Ditto	Ditto		58	January, Fobruary, April to June and October to December.	1	1	404
lerampore	80	Serampore R. C.	21,620	Ditto	Ditto	•••	48	April and October to	11	7	
	86	Singoor ,,	59,184	Ditto	Ditto	, 	151	May to July and Octo- ber to December, July, November and	175	59	13
	87	Haripal,	84,938	February	Ditto	•••	57	I lacem her	350	16	* 88
	i 86		84,387	January Ditto	Ditto Ditto	• •••	139	January, November and December. February, August and	192	26	16
,	86	Kishnagar ,,	55,107			•••		December.	172	16	15
		District Total	851,955	January	December	•••	735	January, April to July and October to Decem- ber.	924	119	80
	r 90		90,818	January	December	,.	488	January to September November and Decem- ber.	1	1	***
•	91	Bali ,	14,815	Ditto	Ditto	•••	61	January, Pebruary, May to July and October to December.	9	9	
	91		128,477	Ditto	Ditto	•••	259	January to March, November and Decem- ber.	205	65	14
Howrah	92		77,589	Ditto	Ditto	•••	96	January to March and December. January to March, May	167	84	18
* , ,	94		109,968	Ditto	Ditto		\$ 158 107	and December. January, March and December.	368	47	87
	96	Bagnan	63,463	Ditto	Ditto	***	90	December. January to March, November and Decem-	216	87	. 17
• •	07		68,861	Ditto	Ditto	•••	195	November and December. January to April, June, July and December.	219 316	38 58	20
1		District Total	635,381	January	December	140	1,454	January to May, Novem-			
•]		1	1			ber and December.	1,496	284	1,9

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1889—continued.

1	2	8	4	5	6		7	8	9.	10	
	tuary the			ers in	1. ii		ders in		each of	NUMBE THOS	E —
HTRICIS.	Number of circles of mortuary registration as shown on the	NAMES OF CIRCLES,	Population of the circles	Date of first case of Cholera the circle during the year.	Date of last case of Cholera, the circle during the year,		Total deaths from Cholera the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in the circles.	Affected by Cholora,	Not affected by Cho- lera.
	{ 9!		51,656	January 1889	December 188	9		January, April, Novem- ber and December.	54	15 10	3
	10		20,982 10,576	Ditto Ditto	Ditto Ditto	:::	196 25	January to December January to March, May and July to December.	11 8	6	
	10	Agarpara ,,	22,739	Ditto	Ditto		40	January, March, Novem- ber and December.	16 11	11 7	
	10	Nowabganj ,.	18,018	Ditto	Ditto	•	68	January to April, June to August and October to December.			
	10	Naihatí	21,535	Ditto .	1	•••	96	February to August and October to December, January, March, April,	89 17	35 9	1
	10	1	20,450	Ditto	Ditto		80 19	June and July. January, April, July and	18	8	
	1 10		10,135 28,648	April	Ditto		67	December. April to July, November	64	19	
	10	7 Cossipur and	26,294	Do.	Ditto		119	and December. April to September, November and Decem-	6	5	
	$\cdot \parallel$,	Chitpur. 8 Tallyganj R. C	47,788	March	Dirto		32 42	ber. March March and December	148 178	9 85	1
	1	Bistopur ,	62,536 71,717	January Ditto	. Ditto		20 57	December	250 162	15 27	3
	1 1		81,858 78,852	Ditto .	Ditto		120	October and December. January, February and	258	47	1
Perguma ha	31		75,830	Ditto	. Ditto		193	December. January to March, May to July, November and	352	45	1
	11,	4 Joynagar ,,	76,140	Ditto	Ditto		143	Japuary to April and	225	40	,
	- !	5 Canning	47,518	Ditto .	Ditto		349	December. January to May, July and December.	240	52	'
	1 1	Dum-Dum	31,578	Ditto .	Ditto		79	January to March, May to September, Novem-	115	29	
_		17 Barrackpore	1 10 440		September December	:::	1 50	ber and December. Very slight April, July, August and	59 187		
	1	18 Naihatti ,, 19 Baraset ,,	79 791	January .	Ditto		64	December. March, May and June	ł		
		20 Deganga ,. 21 Habra ,.	83,516 75,429	Ditto .	December		12 48 71	January, April and May March to June		17 80	
		22 Busirhat ,, 23 Hosainabad ,,		Ditto .	. December		378	January to May, Novem	185	66	ł
	- 11 :	24 Baduria 25 Haron	104,606 49,298	Dirte .	Ditto Ditto Ditto	•••	135 125 77	January. May and June January to June January to April and	196 292 262	84	
	- 11	26 Diamond Harbour ,, 27 Kalpi	00 910	1	Ditto	•••	120	January to March and	1	1	1
	- :	28 Debipur	43,455	Ditto	D D	•••	48	January and December Ditto	259	94	
		29 Bankipur ,, 30 Mothurapur ,,			Ditto	•••	47	January to March and December.			
		District Total	1,673,362	January .	December	•••	2,978	January to June and December.	5,48	785	-
		31 Kishungar T 32 Nuddea or Noba-	. 27,477	January	December	•••	35	April to June	1 .	1 -	Į.
		dwip ,,	14,105	February	Ditto	•••	37	February, March, May to August and Decem ber.		1	
•		83 Ranaghat ,,	8,683	April	November	•••	8	April, May, July and November,	1	1 -	1
	- 11	Si Statipore ,,	1		Ditto	•••	27 40	March to May, July and	1	1	1
	- 11	36 Kushtia ,		Ditto	December		8	ber and December. January and December.			
	- []	87 Kishnagar R.	C. 77,887	Ditto	Ditto	•••	23 6	January to August and December.	i 16	٠ .	1
	1.1	88 Hanskhalı 39 Kıssenganj 40 Chapra	89,701	January	Movember March June	•••	13	January and March	. 8		i 1
udden .		41 Nakashipara ,	59,762 51,192	January Ditto	December	•••	450 286	January to August	111	40)
wanted .	i 1	43 Ranaghat 44 Santipore	75,782	1	December		104	and December. February. November	r 85		7
	- 11	45 Chagda	64,620	January	Ditto	•••	25	Murch and December.	18		1
	- 11	46 Haringhatta ,	38,306	1	Ditto	•••	21	December.	. 1 30		
		48 Kumarkhali	00.4.8		December	•••	110	January, April, May, November and Decem			'
		49 Doulatpur ,,	1	1 .	Ditto	•••	255	June.	ì		1 .
	- 11 .	50 Naupara 51 Bhaluka	41,929	Ditto	Ditto Ditto Ditto	***	367 17 228	April to July November and Decembe	24 11 18	9	11
		52 Bhadulia	, 68,184		July	•••	48	November and December. January, April, Jun.		. ` .	
					- F			and July.	1	1 .	1

	3	8	4	5	6,		7	8	è	1	o O
•	mortusry en on the		ie.	Cholera in 10 year.	holers in		n Cholera in the year.	•	each of	Numb Tho	
Distric ts.	Number of circles of mo registration as shown Man.	NAMES OF CIRCLES.	Population of the circles	Date of first case of Cl the circle during the	Date of last case of Cholera the curols during the year.		Total deaths from Ch the circle during the	PRRIOD OF MAXIMUM INTERSITY OF THE DISTASE AS EXPERSEMENT BY MORTALITY.	Number of villages in the circles.	Affected by Cholern.	Not affected by Chelera,
	154 155 156	Alamdanga R. C. Damurhuda , Kalupol ,	89,947 63,014 39,39 6	January 1889 Ditto March	December 188 July December	9	356 89 . 67	June, July and December January and June March, April, June, July, September, Octo-	156 118 84	40 13 18	11: 10: 6:
ind des— conold.	• 157 158	Jihannagar ,, Meherpore ,,	40,120 65,954	January Ditto	November July	:::	24 47	ber and December. May and July January, February, April, May and July.	77 112	19	6
	159 160 161	Tehatta ,, Karimpur ,, Gangni ,,	89,160 102,754 74,955	Ditto Ditto Ditto	December Ditto July		389 365 99	January to June January and April to June April to July	140 201 148	40 77 18	10 13 12
		District Total	1,655,721	January	December		8,617	January, March to July and December.	3,129	781	8,36
	162	Jessore T.	8,495	January	December		11	January, February, April, June and December.	14	5	
	168	Jessore or Kot- wali R. C.	158,859	Ditto	Ditto		2:6	January, Pebruary, May and December.	414	73	84
	164 165	Ragherpara ,, Monirampur ,,	63,902 155,611	Ditto Ditto	Ditto Ditto		151 400	January, February, April, Msy and December. January, February, April, Msy and Decem-	190 346	32 63	15 26
	106 167 168	Godkhalli ,, Kaliganj ,,	67,420 89,242	April January	Ditto February	:::	51 94	ter. April and June January	147 251	11 27	18 20
	169	Keshubpore ,, Jhcnida ,,	85,450 102,627	Ditto	December Ditto		1%6 225	February to April and June. January, June, July and teptember to De-	152 276	85 54	22
	170 171	Kotchandpur ,,	44,038 188,305	March	December Ditto	:::	38 82	cember. March, April and June January and August	97 389	10 5	3:
ossore	172	Harinakundo " Magura	41,865 159,162	Ditto	Ditto		285 537	January, May to Septem-	120 448	43 128	8
	174 175	Salisha ,, Mohamadpore ,,	50,464 83,677	Ditto	June December		101 284	January, April and Octo- ber to December. January, April and May January, April, Novem-	182 207	27 48	10
-	176	Narail ,	131,862	Ditto	Ditto	}	634	January, April, November and December. January to June and October to December.	889	111	27
	177	Kalia ,,	72,917	Ditto .	Ditto		288	January, April, June, November and Decem- ber.	146	88	1
	178	Lohagarra ,,	103,863	Ditto	Ditto		498	January, March to May, November and Decem- ber.	267	87	1
	179 150 183	Bonzong	59,668 50,223 61,052	February January Ditto	November July April		86 76 36	February to June January, March to July January and March	138 112 159	11 9	10
	182	Moheshpur ,,	112,137	Ditto	December	:::	100	January, March and	225	26 11	21
	183	Sarsha ,,	70,046	Ditto	July	"	220	February and April to July.	145	4	14
		District Total	1,989,375	January	December	**	4,509	January, March to June, November and Decem- ber.	i	908	8,9
	184	Berhampore T.	23,605 10,661	January Ditto	October December		109 33	January, March to May and August. January to March, May,	1	1	***
	186		39,281	Ditto	November		207	July to September and December.	1	1	*
•	187	Jungipore ,,	10,187	March	September		66	January, March to May and July to October. March to June and Sep-	1	1	***
	188	Burwa R. C.	67,912	January	December		144	tember. January, March to May and December.	151	26	1:
	189 190 191	Jellinghi ,, Doulatbazar ,, Sujaganj ,,	108,508 39,568 8,345	January April	July May Do.		226 88 10	March to June January, April and May April and May	214 126 51	50 27 5	10
	192	Goranazar	12,683 78,428	January March	Do. August		69 194	January, April and May April and May January, April and May March and April	52 236	12	2
lurshadabad .	194	Hariharpara ,,	57,135	January	December	**	68	April, May, August and September.	122	17	1
	195 196	Nowada ,, Kandi ,,	47,559 18,242	Ditto Ditto	Ditto Ditto		59 53	January January to March, August November and December.	81 73	13 11	1
	197	Gokurn ,,	49,446	Ditto	Ditto		77	February, April, May, and December.	115	15	1
	198	Bharatpur,	108,025 54,018	Ditto	Ditto September	"	@ 634 18i	January to May, July and August.	209 178	68 17	1
· ,	200	Khurgaon ,	11,177	February	April		28	September. February and April	68	21	. 1
	201 202	Bhagwangola Kaliangani	57,288 57,200	Ditto	July June	:::	6115 42	Robertary to May	DAG	77 18	1
•	209 204 205	Shahanagar , Manullabasar	9,523 3,979	Junuary March	November December	"	20 8	February to April January, July and Sep- tember to November. March and December.	279	1	1
	. 407	Sagardighi	27,859	Ditto	June	• • • •	97	March to May	146	93	1

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Statement prefixed to Mup illustrating the distribution of Cholora in the Bengal Presidency during the year 1889—continued.

	1					1		8	1	10	
1	8	8	4	, 5	6		7	8	9		
Distric ts .	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cholers in the circle during the year.	Date of last case of Cholers in the circle during the year.		Total deaths from Cholers in the circle daring the year.	PERIOD OF MAXIMUM INTERNITY OF THE DISEASE AS REPERSENTED BY MORTALITY.	Number of villages in each the circles.	Affected by Cholers.	
	207	Dewanserai R. C.	\$5,038	January 1889	November	1889	853	February to July and October.	283	41	199
Murshedsbad-	208 209	Shamsherganj	69,586 66,556	Ditto May •	September November	:::	368 264	January and May to July May to August and Octo- ber.	237 150	71 38	166 11 9
ooncld.	210 211	Mirzapur ;, Burowan ;,	45,496 61,417	March January	June December	:::	102 313	March to June January to May, July to October and December.	165 250	19 63	146 167
		District Total	1,226,790	January	December		4,558	January to August	8,561	696	2,865
,	213	Khulna T.	6,202	January	December		59	January to July and	18	8	5
	213	Satkhira ,,	8,738	Ditto	November		20	October to December. January to July and November.	10	5	5
	216	Khulna R. C.	121,098	Ditto	December	•••	273	January to May, No- vember and December.	210	65	145
İ	215 216	Dumuria ,, Baitaghata ,,	109,020 87,501	Ditto Ditto	Ditto Ditto	•••	479 119	January to July January to July and De- cember.	294 120	96 31	196 98
	217 218	Paikgacha , Bagirhat ,	70,478 187,818	Ditto Ditto	Ditto Ditto		104 870	March to August January to May and De-	240 347	45 132	195 215
Khulna	219	Mollahat ,	50,478	Ditto	Ditto		186	cember. January to April, No- vember and December.	121	35	86
İ	220	Rampal ,,	49,827	Ditto	Ditto		181	January to April and De- cember.	178	44	134
	221	Moreilganj ,,	62,670	Ditto	July	***	86	January and March to May.	208	48	185
	222	Satkhira ,	87,876 81,398	Ditto Ditto	Do. October	•••	196 2 21	January and March to July, April to July	198 150	25 41	168 109
	223 224	Kalarua Magura	48,212	February	December	•••	57	March, June, July and December	122	21	101
	225 226	Assasuni Kaliganj	62,412 140,130	January Ditto	Ditto Ditto	•••	143 418	January to July January to May, November and December.	249 481	51 84	198 847
		District Total	1,070,948	January	December		2,942	January to July and December.	2,890	733	2,157
Dinaj pur «	237 228 229 230 231 232 235 234 235 248 237 248 241 242 248	Dinajpur T. Dinajpur R. C. Birganj R. C. Birganj Ranisankuil Pirganj Hemtabad Nowabpanj Kaliganj Bunsibari Patnitolla Moladebpur Patriam Gangaranapur Chintamon Parbatpur Tobstrict Total District Total District Total	12,560 199,826 189,801 220,397 75,102 93,889 85,287 61,037 94,882 81,877 61,238 67,205 48,59d 70,661 74,401 52,058 60,708	March April 1lo, May February December January April April Do. February January March January March	August December June July May December June Do. Ditto Ditto June December December December December		5 27 51 11 13 6 	June and August Slight Very slight June Slight Uery slight June Slight Ditto Ditto May January, April and May April, May and December, April, May and December, Fobruary and May May and July May Slight April and May	1 731 195 581 352 441 549 468 620 513 450 805 684 443 581 215 6,921	5 7 7 1 3 3 3 1 1 1 25 19 80 7 7 7 8 3 3 1 281	726 190 324 351 438 326 468 481 604 488 411 275 677 436 378 812
	844	Ramfore Beau- T.	19,791	January	November		98	March to May, July.	Data	not furni	shed.
•	245	lesh.	81,098	April	December		67	March to May, July, August and October. April, May and July	422	58	866
	246 247	Tanore ,,	\$5,609 43,799	Do March	August December		14 100	April March, April and De-	895 332	2 23	393 301
	248	Putia	121,288	January	Ditto		79 56	cember.	295 307	21 24	274
Rajshahye	249 950 251	Charghat Baghmara Nattore	124,160 121,581 153,063	Ditto Ditto	July December	•••	60 128	January January and May January and April to	461 405	18 17	988 648 886
walenania	252	Singra	112,748	Ditto	Ditto		156	June.	576	17	589
	258	Barigram ,,	121,554	April	Ditto	•••	112	July. April, May and December.	1	20	884
	254 255	Lalpur Naugson	84,962 85,840	March January	April Decomber		150	Very slight	948 846	89	244 807
_	256	Manda,	105,808	Ditto	Ditto	•••	63	April, May and December.	625	7	616
	257	Panchupur ,,	80,960	Ditto	Ditto	•••	103	January, April, May and December.	891	44	34
	1	District Total	1,889,603	January	Docember	•••	1,179	January, April, May and December.	5,189	263	4,870
	200	Rungpore T.	13,320	January	July		111	February to Anril and	1	1	
Yanna	269	Maiganj R. C	116,510	March	May		115	June. March to May	758	4 48 12	710
Rungpore	260 261 261 261	Kumarganj	155,607 154,507 44,619 29,053	Do Do April January	Do.	•••	149 188 2 14	April and May March and April Very slight January	\$86 \$ 327 139 461	125	874 804 187 467

1		11	3	4	5		ø	l 	7	8	9		10
	•	shown on the		e circles.	case of Cholers during the year.		of Cholers in		en Cholera in	Period of maximum	es in each of	T	HOSE—
DISTRICT	rs.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES	Population of the	Date of first can in the circle du		Date of lest case of Cholera, the circle during the year.		Total deaths from the circle during	DISBASE AS EXPRESENTED BY MORTALITY.	Number of villages the circles.	Affected by Cholera	Not affected by lera.
Rungpore concid.	:	264 265 266 267 268 269 279 271 272 273 274	Pirganj R. O Dimia	69,008 138,762 148,672 148,390 128,017 155,635 193,705 58,907 189,027 179,396 91,409	Janury 1989 March April April March Jo April January July January	 Y	January II December Ditto December June December November December December December		24 31 17 16 7 4 24 15	Slight April Slight Ditto Danuary December	1,024 72 897 429		398 528 146 185 783 546 3 1,018 66 896 425 194
Bogra		276 277 278 279 280 281 282 283	Bogra T. Bogra R. C. Sherpur Sheraikandi 'S Sheraikandi 'S Sheganj 'Adamdighi 'S Panchbibi 'S Nownlganj 'S District Total	6,179 216,750 47,327 103,229 40,023 50,080 98,705 66,724 30,374 61,003	May January March April October		October December Ditto Ditto May Desember August June Detober December		7 83 14 13 15 9 44 6 13 1	ber. Slight June and December December	979 284 433 309 446 617 859	24 5 6 4 2 2 3 8 6 1	985 279 427 305 444 594 686 391
Pubns	+	286 8 287 1 288 8 289 1 290 0 291 3 292 8 693 8	Pubna T. Serajganj , Pubna R. C. sara , Dulai Chatmohur , dathura , erriganj , Jhapara , Laiganj , District Total	15,207 21,037 120,180 54,245 182,446 153,447 102,486 108,148 220,411 171,711 92,374 1,511,728	March Do, January Ditto Ditto	N	Docember Ditto December Ditto December Ditto Ditto Ditto Ditto Ditto Ditto		41 26 68 65 21 125 30 93 150 63 68	February to May and December. January, April, September, October and December. April March, April, June and July. Slight April to June April and May October to December January, November and December. April and December January, April and May April and December	1	5 10 20 3 18 43 21 23 55 12 17 227	10 6 437 202 395 417 416 472 487 477 3,536
Darjiling	3 3	197 10 198 K	arjiling T. arjiling R. O. urseong " hansidewa " District Total	28,179 62,465	April March April	Se	ngust Ditto ptember ptember		190	April to August March to July April to September March to August	19 121 69 486	12 17 31	19 109 52 455
ful ps iguri	33338	01 1 02 8i 03 Pa 04 Bd 06 Ka 07 A1 08 Sa	alpaiguri T. Ditto R. C. Illisopeo , stgram , oda , ynagoree , airanti , ipur ibari , District Total	67,471 79,712 64,696 178,643 77,329 83,747 82,088 40,819	February March Do. April Do. Gebruary Innuary April Jonuary Jonuary Jonuary January	Ju De Oc Au No Au Ap Au	lgust b c cober gust veniler gust rii gust vember		10 82 181 50 47 290 235	February to August May and June March, May and June June May and June May and June May and June May and June May and June January snd March to August. April March to August March to July	1 41 281 283 484 109 81 64 64	1 4 85 7 8 26 26 28	37 246 21 476 84 55 63 88
acos	81 81 81 81 81 81 81	10 Na 1 La 2 Kn 3 Sal 4 Na 5 Na 6 Ra 7 Ru 8 Mo	cca T. rainganj ibagh B. C. pasia , ohar , wabganj , ipura , pganj , onshiganj ,	12,561 164,287 119,515 174,681 160,235 91,199 203,788 164,159 243,463	Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	D D D Di Di Di	tto tto tto	1	208 J 121 J 841 J 285 J 269 J 210 A 366 J 474 J 460 J 1,241 J 1,441 J	January to May, July, Novembor and December, anuary to June, November and December, innusry to May and December; anuary, February, April, May and December, and December, and December, and December, and December, and December, anuary to May and December, anuary to May and December, anuary, March to May and December, anuary, March to May and December, anuary to May and December, anuary to May and December, anuary March to May and December, anuary March to May December, anuary March to May December,	164 26 891 651 686 407 685 598 640	69 22 146 66 49 25 40 50 142 188	95 4 745 865 630 882 636 468 498

Statement prefixed to Map illustrating the distribution of Chôlera in the Benyul Presidency during the year 1889—continued.

1	2	3	4	, 6	в	7	8		1	0
Districts.	Number of circles of mortuary registration as shown on the Msp.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cholera in, the circle during the year.	Date of last case of Cholers in the circle during the year.	Total deaths from Cholers in the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DIGEASE AS REPERSENTED BY MORTALITY.	Number of villages in each of the circles.	Affected by Cholera.	
Dacca-concld.	320 321 322	Manickganj R. C. Jasterganj ,, Harirampur ,, District Total	184,196 143,013 100,009 2,116,350	January 1889 February January	December 1889 Ditto Ditto December	211 152 75 4,899	January, April, May and December. March to June and De- cember. April and May January to May and	417 420 238 6,625	53 82 45 1,059	384 584 194 8,584
Faridpore	323 324 326 320 3.7 323 329 330 331 332 333 334	Faridpore T. Ditto R. C. Bhushna Awanpur Maksudpur Bhanga Madaripur Gopalganj Shibchar Kotalipara Gosulundo	10,263 61,289 107,415 100,257 156,933 104,389 165,917 256,250 85,341 116,048 66,153 106,050 150,366	March February January Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto March	December Ditto Ditto	14 59 715 364 891 840 449 1,545 256 382 146 208	March to June, November and December. April and December. January to May, November and December. January, March to May and December. January to May and December. January to May and December. January to May and December. January to June and December. January to June and December. January to May, November and December. January to May, November and December. January to June January to June January to May, November and December. April. May, November and December.	7 991 418 455 480 410 427 480 143 153 217 311 674	1 19 97 55 81 111 84 256 38 52 23 44	184 891 291 844 22 110 190 863
	836	Beliakandi ,, District Total	1,631,734	January	December	6,109	March to May and Decomber. January to May, November and December.	4,669	945	8,72
Buckerganj :	345 346 347 548 344 350 351	Barisal T. Ditto R. C. Jhalakati " Nalchiti " Backerganj " Gaurnaddi " Baurnaddi " Barisal " Baupkati " Patuakhali " Bauphal " Galsakhali " Galsakhali " Galsakhali " Galsakhali " Galsakhali " Galsakhali "	13,186 113,733 143,416 78,061 185,506 145,711 184,192 117,638 98,032 160,284 73,352 173,801 98,186 98,732 59,377	January Ditto State Ditto	July December Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto June December Ditto	64 855 871 186 713 988 481 234 676 303 804 1,424 555 1,077	January to April, June and July. January to May January to May January to May and December. February to May and Ibecember. January to July and December. January to June and December. January to June January to June January to June and December. January to June and December. January to June and December. January to June and December. January to June and January to June and January to June February to June February to June Amanda Juneary to June January to May and December. February to June January to May and December. February to June January to May and December.	809 186 309 204	1 150 106 67 128 193 82 69 123 88 53 139 215 109	16 28 17 11 18 40 17 5 39 1 16 7 20
	352 353 354	Barhanudi ,, District Total Jamalpore T.	123,169 • 80,061 1,900,889	Ditto January	Ditto December	570 502 10,416	December. February to June and December. January to June and December.		58 1,618	18 18 -8,71
Mymensing	856 856 357 858 369 360 861	Jamalpore T. Kishorganj " Tanvail R. C. Ishwarganj " Gaffargaon " Phulpur Netrokona " Duranpur Jamalpore Sherpore Dewanganj " Kishorganj " Bazitpur Nikli "	18,091 12,898 18,124 282,843 224,453 117,759 114,407 471,658 119,457 183,298 187,066 101,372 122,705	January January Ditto May January May January May January Ditto Pebruary January Ditto Ditto	December December Ditto Ditto Ditto June Ditto Ditto Joeenher Ditto June Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	26 14 1,052 251 281 28 805 41 219 78 66 817 583	April and May April to July January and May to July January to July and December. December. January to July and December. May and June May to July May, June and December. January to July and December. January to July May, June and December. January to June and December. January to June and December. January and April to June.	4600	138 24 28 29 48 60 19 6	2 1,08 1,42 43 71 8,12 90 65 1,88 84

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1889—continued.

97,	1		8	8	٠	5	. 6	7	8	9	30)
*			a che	₩.		E j	iers in	E E		esch of	Numbi	
	Districts.		registration as shown of Map.	NAMES OF CURCLES.	Population of the circles.	Date of first case of Choloration of checking the year.	Date of last case of Cholera, the circle curing the year.	Total deaths from Cholers the circle auring the year.	PERIOD OF MAXIMUM INTERNETT OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in the circles.	Affected by Cholera.	Not affected by Cho-
;	Mymensing— conold.	{	369 370 371	Altia or Tangail B. C. Gopalpur ", Pingna ",	442,119 217,736 76,262	January 1889 Ditto Ditto	December 1889 Ditto Ditto	. 19	2 April, May and December		40 25 18	1,685 1,144 628
				District Total	3,086,948	January	December	4,77	7 April to June and De	15,719	511	15,208
,			878 878 874 875 876 877	Chittagong R. C. Raujan Mirsorai Kumaera Banakhali	22,130 53,622 144,380 76,799 58,611 101,758	March January February March	December Ditto Ditto May September		March to May and December. 2 Very slight March and December March and April. March April, Augus and September.	26 124 124 110	8 10 4 16	18 24 114 124 106 114
	Chittegong .		378 879 380 381	Satkanyo	147,515 101,500 180,448 81,830	May March January March	August May December	14	15 Slight	d 221 . 63	84 84	189 98 187
		į	362 388 884 885	Cox's Bazar ,, Maskal ,, Chakariya ,, Teknaf ,,	62,417 29,158 38,825 30,548	March	March		March	80 27 54 107	8	80 24 54 107
				District Total ,,	1,132,341	January	December	.			91	1,299
			386 887 388	Sudharam T. Sudharam R. C. Lakshimpur ,	5,124 96,18 4 113,921	March January Ditto	August December	. 55	cember, January to June an December.	d 839	38 86	\$88 298
	Noakhali	[889 890	Ramganj ,	80,742 128,933	Ditto	Ditto	ا ا	and December. S February to April, July	v. 510	69 45	361 465
			391 392 393	Bamni ,, Sandip ,, Hattin ,,	41,781 72,467 40,295	October January March	October March December	٠١ ٠	August and December Very slight February and March March, April and December,	46	1 8 11	45 77 78
	•	, ,	394 395	Fenny Chhagalnaia	132,697 109,278	Do January	Ditto Ditto		March to August	413 945	92	864 224
			•••	District Total Comillah T.	820,772	January	December .		March to July and December. March to May, Noven		325	2,303
		ĺ	396 397	Brahmanberia	13,506 17,543	January	Ditto .		ber and December. January to July an December.	- 1	7	5 13
		ı	898	Comillah R. C.	125,879	Ditto	1	" I . "	83 March to May, July an December.	_1 .	43	643
		ļ	399 400	Chandina ,	78,521 143,222	Ditto	Ditto .		Ol January, May an December. January to April an December.		120	591 539
			401	Muradnagar ,,	152,322	Ditto		1	December. January to May an December.	d 545	513	403
	Tipperah	{	409	Jagannathdighi .,	103,218	Ditto	Ditto .	2	63 January, March to Jul and December.	·	49	589
			468	1	86,872	Ditto			67 January to June an December.	d 654	90	564
		j	404	Trade.	218,774	Ditto		١.	41 March to May	597	61	506
		1	406	Walanana	114,153	Ditto	7044		16 January to May an December. 80 February to May ar	1	51	884
		į.	407	Chandpur ,	175,971	Ditto		1,1	Doggershan	1	128	811
		Į	408	1	90,893	Ditto	70144		December. January to May as December.		24	533
				District Total	1,514,361	January	December	4,0	January to June as December.	6,481	736	5,745
,			409 610 611	Behar ,	160,237 48,971 59,235	January March July	October November		20 October 41 July, August as October.	1 -		166 61 4
	;	j	411		28,610	February	1	1	91 February. June December.	to 4	•	
K	Patna		41	Bankipur , Bikram , Massaudhi ,	99,877 97,001 180,362 190,618	Pebruary June February	October September	. 1	June to August July to September July to September	969 068	23	845 645 609
		- 1	41	Dinapore ,,	15,887	May	December .	- 1	96 May to October as December.	nd 116	81	85
	· · · · ·	,	411 414 484 484	Barrh ,	98,516 170,589 93,524 88,051	Jane August April January	June December		9 Very slight 25 April 68 July to September as December.	276 595 160 311		230 569 155 284
	* y		49	Febar ,	288,812 91,477	July Do			94 July and August	761 841	13	748

1			8	4	Š _t		6		7	8	a	10	
	town			,	olers in year.	İ	ë j		ers in	•	orcy of	NUMBE	B 07
Districts.	Number of circles of mor	registration as shown on the Map,	Names of Circles.	Population of the circles	Date of first case of Cholera the circle during the year.		Date of last case of Cholera the circle during the year		Total deaths from Cholera the circle during the year.	PERIOD OF MAXIMUM INTERNSTY OF THE DISTABLE AS REPRESENTED BY MORTALITY.	Number of villages in the circles.	Affected by Cholers. ,	Not affected by Cho- lers.
atna-concid	21		Attasarai R. C. Hilsa ,	78,932 176,075	May 1889		November 188 September	9 	17	May, September and October. Very slight	424 892	3 14	421 878
		426	District Total Bys T.	76,121	January January		December December	-	1,821	June to September January to December	5,960 1	1	5,868
	i۱	427 428	Daudnagar R.'C.	9,870 215,592	July April	:::	September October	:::	19 414	July to September May and July to Sep- tember,	718 710	1 181 20	587 690
		450	Sherghati ,, Attri ,, Tikari ,,	169,319 78,516 176,805	Do. Do.		November October Ditto		82 31 141	April and August April, September and October. May, August and Sep-	152 558	5 18	147 540
ya		432 433	Barachati ,	96,211 245,429 92,296	March April Do.		Ditto December October		177 768 144	tember. June to August July to October May, June, August and	402 816 966	14 55 15	478 761 948
		435° 436 437	Daudnagar	98,046 274,754 110,435	Do. June April		November Docember November	:::	513 84 237	September. May to November September and October July to October	480 563 886	187 17 78	295 551 265
	H	438 439	Nawada ,, Rajauli ,,	391,713	June August	••·	October September	:::	120 245 3,422	June August and September June to October	725 485 6,300	13 6 556	715 479 5,740
		440	District Total Arrah T.	2,124,682	January June		December		20	July and August	11	7	0,74
		441 442	Buxar	17,668	Do.	•••	November October		105 52 304	June to September and November. August to October	1 524	1 1 30	
		443	Belauti ,,	281,487 195,879 1/9,492	Do. Do. July		November December	•••	805 80	July, August, October and November. June to September July and August	301 516	20	28
badadani	-{	445 446 447 448	Buxar	145,587 242,103 157,780	June May March		Ditto November Ditto		31/2 211 472	June to August June to September April and July to November.	435 434 651	42 23 34	89 41 61
		449 450 451	Kharghar " Dhangain " Deliree "	104,647 179,916 78,834	July Do. June	•••	October November December	•••	161 286 323	August to October July to November Ditto	425 595 506	14 90 17	61 67 24
		452 458	Bhabua ,,	171,823 150,413	March Do.	•••	November		463 906	March, April and July to September. April and July to Octo- ber.	1	32 41	75 55
			District Total	1,964,999	Mar-		December		4,080	July to November	5,574	289	5,2
	(Mozufferpore T.	1	1		i		51 25	January and July to December. July to September	1	1 .	
		456 456 457	Sitamarhi ,, Hajipur ,, Lalganj R. C	6,125 25,695 16,783 500,596	May Aplil	•••	September Ditto November Ditto	•••	42 35 229	August and September September to November	1	1	1,0
Mozusterpore .	{	458 459 460	Paru	288,967 187,340	April January	•••	Ditto Ditto	•••	207 423 1,436	June to August	548 211	80	5
		463 463 463	Sitamarhi Pupri	463,137 222,516 146,116	April Do.	***	November December	•••	807 216	Ditto August to November	214 194	85 29	1
4	Į	464 466 466	Hajipur ,, Mahua ,, Lalganj ,,	244,530 810,444 127,079	June	•••	November	•••	67 61 106	August Slight July, August and No	. 652	1 .4	1 6
			District Total	2,582,090	January		December		8,684	July to November .,	4,981	290	8,9
	ſ	467 468	Durbhanga T	0. 837,428	April		Ditto	•••	376 1,155 66	July to November	. 879	39	i A
	-	470 471	Bahera	1 4 D/74	Angust	:	November	•••	70	August and October	768	9	
Durbhanga .	{	472	Dalsingsarai , Nagarbasti ,,	279,504 169,940	August April	:	Ditto December	***	70	Very slight	. 897	1 4	1 1
		474					. Ditto	•	471 251	tember to December.	620	2	
	Į	477 477				•	Management on	***	79	July to December	766 981		
			District Tota	2,633,44	7 January		December	•••	3,54	July to November .	6,050	198	6,:
		471 471 48	Hewan ,	18,31	July	••	. September	•••	29	July to Meptember April and June to Octo	1 1	1	1
Sarun		48	Chupra R.	C. 274,36 149,67	March April	••	Ditto September		17	August and September. May to July	50	8 J. V. 14	
		48 48 48	Parsu ,	223 450	1 Do.	••	. November	••• •••	. 9	October and November .		3 2	
	,	48		665. a .1680			" Manage hou	•••	1				•

. 1		3	4	5	• 6	7	8	9		10
	mortuary wn on the		oles.	Cholera in he year.	of Cholers in g the year.	the year.	•	in each of		PER OF
Districts.	Number of circills of mo registration as shown Map.	NAMES OF CIRCLES.	Population of the orroles	Date of first case of Cholers the circle during the year.	Date of last case of Ch the circle during the	Total deaths from C	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS DEPENDENTED BY MORTALITY.	Number of villages in the circles.	Affected by Cholsen.	Not affected by Cholera.
Serun -conoli.	487 488 489 490	Darsuli R. C. Rassuntpur ,, Gopalgan; Banggoon ,,	223,458 210,810 260,385 284,681	May 1889 April July February	December 1889 Ontober November December	168 154 160 150	June, July, September and October. May and June	552 890 469 859	29 91 17 10	528 869 412 849
Chumparun{	401 402 493 404 495 496 497 498 499 500	District Total Bettiah T. Bettiah R. C. Basaha M. Lauria Motihari Govindganj Motihari Masariya Madhubun Mad	\$1,263 \$49,972 \$40,972 \$140,900 \$191,917 \$176,748 \$268,952 \$177,052 \$138,996 \$105,086	June May July June October May August June April	October December October December Ditto November December November November October December November October	6 117 96 163 90 96 82 25 111 6	September	1 1,684 655 839 892 736 777 1,052 522 615	288 1 15 13 17 4 14 16 8 4 16 8	1,669 643 615 888 789 1,048 606 612 7,671
Monghyr	501 502 503 504 505 506 507 508 509 510 511	Monshyr T. Jamalpore ", Shekhpura ", Monghyr R. C. Jamalpore Gogri ", Kharakpur ", Beguserai ", Tregra ", Shekhpura ", Shekhpura ",	67,520 13,603 12,617 81,736 6,261 365,954 143,679 166,263 379,704 203,682 186,463 122,389	Pebruary June Do. May September April August May Do. Do. March June	November November November November Ditto December November October December December Ditto September October	228 108 22 83 10 209 469 110 885 111 108 68	October. July to November June to October June, Soptember and October. August to November May, June and Roptember. August to October June, July and September. June to August May, June and August June, July, September and October.	76 14 1 100 6 813 831 888 509 248 868 137	47 14 1 18 28 40 36 44 25 25 6	29 .87 .4 288 291 368 485 223 376 131
ا پ	513 514	Jamui , Chakai District Total	120,568 100,540 1,969,774	Do. March	November Ditto December	2,045	June and July August to October June to October	991 3,583	18 298	206 978 3,290
	515 510 517 518 519	Bhagulpore T. Bhagulpore R. C. Kumargani or Sultangani, Kolgong, Bihipur,	57,463 100,379 98,427 193,237 98,408 299,042	January May April April April January	November December Ditto November	190 440 829 124	May, June, August to October and December, July to November June to November April, June and Novem- lier.	1	46 40 41 92 7	16 255 243 373 63
Bhagulpore	520 521 522 523 524 525 526	Supul Pertabganj Rongong Madehpnr Riesenganj Banka Amarpore	159,272 149,560 262,678 185,828 134,237 208,508	Ditto April March April March March	December November Ditto July November November	55 776 183 262 101 66 264	Slight March to May April to June and October. March, April and November. April to June August and October July, August, October and November.	331 184 280 207 286 313 393	19 18 11 18 11 36	336 148 266 198 278 302 358
•. *	527	Katuria ,, District Total Purneah T.	77,644 1,966,168	April January January	December December May	3,095 *155	June to August, October and November. April, May, July August and October.	166 3,265	319	2,946
Purneah	529 530 531 532 533 534 535 536 537	Purneah R. C. Kasba Amour Dhamdaha Gondwara Arraria Motihari Raniganj Kissenganj Bahadurganj!	138,704 124,880 100,991 123,945 200,012 94,115 107,552 158,100 190,142	Ditto February Ditto Ditto Ditto Ditto Ditto March February	Do. December May Do, June Angust December Ditto	8,960 980 1,470 2,032 8,777 1,227 1,647 185 380	March to May February to May March to May, November and December. March to May March and April February to May March to May March to May March to May March to May February to June April, June and October March to May, October and November. March to May, October and November. March to May, October	268 424 168 144 833	205 72 45 91 168 88 33 185 58	63 352 133 53 170 115 83 126 299
	588 559 540 541	Kaliaganj ,, Kadwa ,, Balarampur ,, Monihari ,, District Total	277,059 184,275 415,031 54,456 1,848,687	Ditto January Ditto Dipto January	Ditto Ditto Ditto June December	255 1,400 68 219 17,750	March to May, October and November, March to May, October and December, April January and March to June. March to May and November.	\$62 \$09 \$62 182 \$,708	88 87 8 21 1,078	252 252 354 111 2,680
Maiduh .	542 548 544 545 646	English Basar T. English Basar R. C. Maidah, Gajol, Hatna,	19,430 ,72,615 50,894 .54,317 80,024	March January Pitto Ditto April	Ditto August December	34 221 55 59 195	April, May, July and August. April to June and August. January, April and May May, June, November and December.	88 213 835 596 343	15 81 15 28 28	23 162 820 558 320

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1889—continued.

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		on the		i	oler in	,	Cholers in		e i		each of	Numi	
, ' Districts	•	Number of circles of mortuary registration as shown on the Man.	NAMES OF CIRCLES.	? Population of the circles	Date of first case of Cholera the circle during year.		Date of last case of Cholera the circle during the year,		Total deaths from Cholera the circle during the year.	PERIOD OF MAXIMUM INTERSITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in the circles,	Affected by Cholers.	Not affected by Cho- lera.
. Maidah conold.	-	547 548 549 550	Kharba R. C. Gomestapur ,, Kaliiachak ,,	103,051 52,810 115,692 102,162	May 188 Junuary Ditto	9 	December 1: June December Ditto	889 	52 117 279	May and December March to May January and May to July. January, November and	841 248 277 241	15 32 52 87	526 216 225 204
	ţ	551	Nawabganj ,, District Total	66,453 710,449	March January		Ditto December	***	1,080	December. April and May April to June, August and December.	3,060	16 984	248 2,816
	{	552	Deoghur T.	8,008	March		December	•••	43	March to May, July to September and Decem- ber.	111	43	68
Sonthal Per gunnahs.	. }	558 554 565	Pakour ,	863,186 263,825 204,919	Do. January March	••• •••	November December Ditto	***	128 592 531	August April to August April to August and October.	2,909 1,327 1,254	17 114 197	2,892 1,913 1,127
	l	556 557	Deoghur and Jamtara. Godda	389,605 348,403 1,568,093	Do. April January	•••	November Droember	•••	1,560	May and July to September. April to November April to September	1,758 12,356	189	1,676
	ſ	558	Cuttack T.	43,239	January		December	•••	195	March to August and October to December.	128	59	11,709
		559 560	Kendrapara ,.	15,696 11,233	Pehruary Ditto	•••	October December Ditto	***	101	March to August March, May to August, October and November.	64 81	27 86	37 42
	1	561 568 563 504	YCuttae R. C. Banki , Salipur , Jaggataingpur	155,885 56,900 849,979 215,091	April March February	***	November December Ditto	*** *** ***	1,858 1,263 1,495 1,364	February to December April to November March to December April to September, No- vember and December.	1,271 195 780 1,282	276 124 824 301	995 71 456 981
Cutiack .	"]	565 566	Tirtola Kendrapara ,,	183,677 175,324	Ditto January		Ditto		1,581 1,532	April to September and December. April to July, September, November and December.	1,097 1,576	27±	857 1,804
		567 508	Patamundi ,,	109,401 91,015	March January		Ditto Ditto	•••	764 1,152	April to August and November. January to July, Octo- ber and November.	7 20 -	1 136 236	584 387
	1	509 57u	Jajpur ,, Dharamsala ,, District Total	239,503 248,762 1,795,065	February Ditto January	:::	Ditto Ditto December	 **-	1,492 2,216 14,887	April to December Ditto April to December	783 1,549 10,069	815 470 2,819	438 1,079 7,950
		571	Poori T.	24,784	January		becember .		589	January, March to August, November and	1	1	***
Poori		578	Poor: R. C. Pipli, Gope ,	197,849 226,782 116,167	Ditto Ditto March		Ditto Ditto Ditto		8,998 8,090 783	March to August, November and December. March to December. April to August, Novem-	1,817 1,581 953	665 802 148	652 779 805
		575	Khurda ,	269,478 53,927	January Ditto		Ditto Ditto		6,844 8,505	ber and December. March to August and October to December. February to October	939 509	605 486	124
•			District Total	888,487	January	- 1	December	•	18,669	March to December	5,290	2,907 not sepa	2,883
		578	Balasore T. Balasore R. C. Soro ,,	20,265 87,420 197,508	March [January Ditto		December Ditto Ditto		213 1,547 2,808	March to August, November and December. January, March to August and November. January to August, November and December.	581 1,321	urnished 257 487	894 884
			Jellasore ,,	55,102	Ditto		Ditto		883	vember and December. January, February, April to August, Rov- ember and December. February to July, No- vember and December.	425	97	526
Balasore		EN	Balianal ,,	89,226 71,186	Ditto		Ditto Ditto	·	918	ber and December.	567 475	175 158	392 307
	11	584 1	Shadrak ,, Basudevpur ,, Dhamnagar ,,	169,972 71,854 132,521	Ditto Ditto	-	Ditto Ditto Ditto	::-	2,257 1,8 45 1,567	January to August, November and December. February to July January to August, November and December.	1,840 477 867	188 849	918 294 519
		984	Chandball ,, District Total	51,926 945,280	Ditto January		Ditto December		1,225	January to July January to August, No- vember and December.	840 6,898	158 3,801	182 4,092
		586	Hasaribagh T. Hasaribagh R. C.	15,806 87,718	June July	1	August October		100	July and August July to October	11 381	, 8	4 895
Hazarıbagh	i I	591 592	Chatra	64,018 50,302 87,029 47,094 70,487	April July June	:::	September August Soptember July June	***	. 29 24 8 44	August and September April and May July and August Slight May and June	885 830 846 465 495	2 3 1 2 5	895 895 895 845 468 468

XXXVII

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1889 - concluded.

1	8	8	4	5		6 ,		7	8	9	10)
	d mortuary		ģ	okra in year.		Cholers in he year.	Ì	Cholera in the year.		each of	Numbi Thos	
Districts.	Number of circles of m registration as sho the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Chokers the circle during the year.		Date of last case of Ch the circle furing the		Total deaths from Ch the circle d fing the	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPLESENTED BY MOUTALITY.	Number of villages in the circles,	Affected by Cholera.	Not affected by Cho- lern.
1	594	Jageswar R. C.	58,593	April 1889		October 1889		60	April, June, July and October.	480	. 11	469
Hazaribagh — :	596 596 597 698 599 600 601 602 603	Barhi	52,084 56,494 72,958 55,780 53,875 86,097 88,685 150,645 78,802	July March June July March Do. Do.		August September Ditto Ditto Ditto August September June	***	39 196 78 68	August	263 827 884 836 456 769 674 1,051 515	2 4 17 7 	\$60 548 867 329 456 754 669 1,048 515
		District Total	1,104,7 48	March		October	".	790	June and August	7,807	94	7,713
,	604 605 606 607 6 8 609 610 611 619 613 614 615	Ranchi T. Ranchi B. C. Sili	18,443 122,152 68,335 98,636 67,988 56,220 104,140 66,253 51,080 89,078 122,023 106,719	May June Do. June May July June July Do. June Do.		September Ditto Ditto August September Ditto Ditto October September October September October	**** *** *** *** *** *** *** *** *** *	1,310 48 69 655 565 216 155 120 741	May to September June to September July and August July and August June to September May to September July and August July and August July to Cotober June to October July to September July to September July to September June to September June and August to October October October October June to September June to September October O	1 812 353 282 355 240 592 570 473 322 027	1 100 5 17 40 48 18 92 19 50 29	708 348 255 806 197 874 549 460 972 598 193
Lohardugga	616 617 618 619 620 621 622 623	Biru or Kochadege ,, Bassia	66,061 88,234 64,203 75,800 64,300 86,591 79,655	August June August May August Ditto	:::	August September Ditto September Ditto	•••	67	Very slight July and August August and September May to September August and September	178 288 592 367 168 252 454	1 6 8 	172 262 569 867 168 236 446
	624	Hossainabad or Majhwar ,,	103,515 46,993	April		October		169	May to August	189 499	19	188
	625	District Total	1,609,244	May " April		September October			May, June. August and September. June to September	7,798	448	7,855
Singbhum	628 627 628	Chaibassa T. Chaibassa R. C. Chackardhur- pur ,, Ghatsilla ,,	6,006 205,652 76,408	May January June		September December November	:::	12 141 256	May to September July to October June to October	812 880	47	765 3 91
,	629	Ghatsilla ,, District Total	165,709 453,775	January Ditto	•••	August December	***	100 509	April and May **. May and July to Sep-	2,837	115	1,126
	630 631 633 633 634 635 636 637	Purulia T. Purulia B. C. Ragbunathpur Jhalda " Manbazar " Para " Baghmundi " Ichaghar "	9,304 177,487 108,668 91,591 68,615 39,740 35,384 64,242	March February March January Ditto April Do. January	000 000 000 000 000	August September Ditto August Ditto September April September	000 000 000 000 000 000	181 435	tember. March to August April to August April, June to August May to August Map to August April to August Slight March to May and July to September.	1 844 452 418 435	1 65 18 82 10 25	779 454 586 425 197 176
Manbhum	638 639 640 641 642 648	Barabhum ,, Gouraudi ,, Chaes ,, Gobindpur ,, Niraba ,,	133,847 45,793 89,173 89,673 50,627 48,018	March February May March Do. Do.	***	July August October August D.tto November	 	26 150 201 30 31 44	April and June to Augus May to August April and July March, July and August May, June and August to	863 331	6 11	902 496 357 320
7 3	844 845	Toondi ** Jharia **	18,417 89,854	April	•	September	•••	22	April and May	. 344 363		344 869
		District Total	1,058,228	Jenuary	•••	November	٠.	1,916	April to August	6,142	285	5,857

Office of the Sany. Commr. for Bengal,

The 24th May 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Benga!

APPENDIX No. 111.

SUMMARY OF SANITARY WORKS, IMPROVEMENTS, &c., CARRIED OUT IN TOWNS AND DISTRICTS, INCLUDING PRIVATE CHARITIES,

DURING THE YEAR 1889.

The following table shows the Sanitary Works, Improvements, &c., which were carried out during the year 1889 in Municipal Towns, in the Interior of the Districts, and by Private Individuals. The cost of the works is also mentioned.

-
In progress. Cost.
Bs.
29 5
-
Construction of a pub- lic latriue 173
. 4: ***
1,157
:

		Is the Towns.				-	JR THE INTERIOR OF THE DISTRICTS.	œ ³		BT PRIVATE INDIVIDUALS.	
1	Name of		Nature of work.	work.					=		
District.	Town.	Completed.	Cost.	In progress.	Cost.	District.	Nature of work.	Cust,	District.	Nature of work.	Cost.
			R,	,	8.	-1-1-1-1		B9.			鵓
	Tamluk-	Dreway and turing the	2	, make make a special section of the		nen go _ en giberry	war water W Y		₩ . ₩.ww.z		
		Placing a palm tree nipe on a road	. 2	***		-		 -	ند شد		
	Ghatal	Two latrines	ß	Nd.	٠				:. = 		
M.dnapore-	Chandrakona	A new road	20	Completion of a portion of a road which was	71			veen and 40 %			
	Ramjibanpur	A latrine	44	Three eniverts	ş			· · · · · · · · · · · · · · · · · · ·		•	
	Khirpan	Two kutchs roads Nine pucca bridges and	11 8	Wil.			-		mineral property of the control of t		
	Khorar		3	Nii.			N. A. (**				
	Hughli and Chinsurah.	A urinal Purchase of stoneware	2 28	Portion of a drait Three culverts	39 113	Kughh			Hughli	A tank was excavated a by one Baboo Nil Ma	Ş
	Jebanabad		,	N:1.			•			Construction of three puece shats on	}
	Bansharia	Construction of Tribeni burning ghat patform Six pucca latrines Temporary latrines	85.5 85.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.	N41.					and the same of th	the vanks of river Hughli at a total	1,275
•	Serampore		2.200 7,454 532 20	N.							
		Original and repairworks relating to markets Conservancy sheds re- paired Drains repaired replated replated Workshop renaired	8 11 14 9 8 4 2 2								
	Utterpara	Metalling of three streets. a lane and a road	27.4	Construction of four pucca drains and culverts	• Not stated.			Andreading from the specimens of			
	***************************************	Four proces drains	303 773								
,	Baidyabati	Cost of acquiring land for the purpose of a trenching ground Cost of skoneware drain-A kutche postab in a road	74 2015	Nil.				***************************************			
ŧ.	Bhadressar	A street remetalled Six culverts repaired A bridge reconstructed Mehler's hut	85 E E	Nel.							
					٨		_	_	· •	-	

	6,500	និ	19,061 1,060 1,000
Nil.	Rani Raj Kumari Dasi of Calcutta made over to the Baranasore Muni- cipality for the use of the public a Guegodari Grar (room) at Aradah shibtola ghat, and a tank and a square at Dukhineavar	The Secretary to the Sibhati Mangh Samiii contributed Rs. 300 to the secretion of a culvest over Fubria khali, while the rate-payers of Petria, a villege in the North Dum-Dum Muncipality, paid Rs. 195 to wards the metalling of the Patria Raboo Jogendra Nath Mitra made an free gift of 8 bylass and 19 katals of land to the Joynagore Muncipality for the purpose of erecting a public burning ground.	Twenty-five tanks excavated
Howrah	24 Pergunushs	•	Nuddes
The second secon	246 13,555 1,685	6,195	85 85 85 4
No santary works were executed in the district during the year except the completion of Rajapur ennage works by which 129 square miles have been benefited both in matters of santation and irrigation	Contribution made by the Basirhat Board towards the construction of a culvert over Fulars khal	A sum of Rs. 6,185 was also spent during the year on account of relief works in Diamond Harbour subdivision. The re-execution of a khall from Srichand to Rajarhat and of a sluice channel from Prinightee to Nelna in the Diamond Harbour, the former at a cost of Rs. 2,400, and the latter at Rs. 1,15, were under proverse during the year. The remindars whose properties are improved are to pay the cost of these works.	The District Board constructed three new unmetalled roads at a total cost of
Почтай	24-Pergunnahs	- 17 /	Nuddes
:	5.78.5 5.78.5	2.096 1.460 100 831	1,107
Nil	Metalling of 17 roads Nil. Nil. Nil.	Nii. Municipal office build. A burning ghat A nunicipal tank Five roads and 14 pipe culveris Nii.	Three roads and a drainage in Halishar were in properties from Mil. Nil. Metalling a road and Nil. Nil.
12.1 22.4 2.065 2.596 1.085 1.285 1.285 1.285 1.081	821	1551 1,247 1,022 1681 189 107 1,107 1,25 1,25 1,25 1,25 1,25 1,25 1,25 1,25	3,000 100 100 100 100 100 100 100 100 100
rearising or wees on road- sides of 188 feet glazed stone for charactering the flow of rain-water Four lanes and a street One twenty-seated latrines fix eight-seated latrines fix eight-seated ditto One two-seated One six-charabered urinal Three lanes constructed Ditto and roads re- paired	Nil	Barthwork including purchase of land for opening out a new road Seven roads and hands and manufacturent construction of four metabled roads Construction of four metabled roads Seventeen culverts	A listrine
Kotrung Howrah	South Subur- ban Cossipore Manicktolla Baransgore	Barrepore Rajpore Joynuggut North Dumbum South Dumbum	Naihatti Baraset Gobardanga Bassirhat Basutua Kumarkhali Kishnagar Kishnagar Kishnagar Kishnagar Kushlaa
Howrah		24-Pergunnahs	seppon K

													i	
	ţ	je S	描		9,840	1,500 850		10,325			922	·	37,32	
By Private Individuals.	Met men of the second	TABLETO OF MOTE.	In the Sudder sub-division a road was constructed by one Baboo leant Chun- der Duta at a seet of Rs and and	two tanks were excavated by two other private individuals at a cost of Re, 550 and Re. 540, respectively while in the sub-divisions of Magoora and Romerous threa tasks	cavaled at a total cost of Ra. 1,250	Do, re-excavated	,	Twenty-eight lanks excavated			Moulvie Abdul Guffoor, a Municipal Commissioner, constructed a paces well on the road side for the benefit of the public		A good many tanks were ox avated	
	Titio		Jessora			Wursh dabad		Khulns			Dinsjpur		Rejshahye	
	ţ	*	Rs.	L SI WORF -		Ē						925 191 Not stated.	<u> </u>	Not stated.
IN THE INTERIOR OF THE DISTRICTS.	Notana to control	Mature of work.	Ni			Iwo drainage outs cleaned and re-		NH			Since the completion of the main drainage canal reported in 1888, the Municipality constructed a few purca as well as futch anhesiant and minor drains in three blocks at a cart of Re, 935, and active mea.	sures were being taken by them for completing the scheme in a short time for which purpose they have applied to Government for a loan of Rs. 10,000 Clearing of jungle around the sub- divisional cutchery at Thakurgaon by the District Board	Outting of drains and elearing of drain- age channels Reads repaired Renowal of bridge over a khall on the Nations on the constructed A bridge road A bridge controlled	Remowal of several bridges and diversion of roads
I'N	- titi	District.	Jessore 1		Annual Control	Murshedabad		K bulna		*	Dinajput		Rajshahye	
		Cost.	Re. Not stated	<u> </u>		•:	92		<u> </u>				002,3	
	work.	In progress.	A puccs drain	54.	Nil.	Net	Nil. Nil. Metalling of roads	Nii		Nu. Nu.	Nu		Construction of a central drain for admitting river water into the filthy tanks and ditches	
	Nature of work.	Cost.	Es. 941	300	18 18 18 118	220 111 143	248 88 340,8	2,541			867 1, 468 1, 468 10, 47		25 10	101 163 163 16 658 697 1 000 1 000 886
IN THE TOWNS		Completed.	A ressoury well	A tenk excentied	Three wells sum. The calvers	A latrine for women A pucca drain Construction of sheds for mehters, cattle and for godown articles	Threetpnocaldrains Two pucca calveria A welk 772 Roads metalled	Completion of the earth- work of Mr. Clay's tank with its fencing and a pucca glast	Carting of rubbish, &c., for constructing a me- talled road	Verte, &c. Construction of roads Construction and repair of roads	Paces drains constructed These purca wells sunk A tank ercavared Do, deepened Earthworks	•	Construction of a bamboo bridge across the shallow channel in the river to obtain drinking water A diffed filled up	up of a ditch which was onnmarked last year. Extension of two drains for drains constructed Admin cut Eight culvers Frow lattimes Two takines Two than two two Two than an experiment Two than an experiment Two than two two One anglet and and two otherway carls pur-
,		Town.	Jessore	Kotechandpore	Mobeshpur	Berhampore	City Murshed- seed. Jungipore	1 1		Satkhira Debhatta Chanduria	Dinajpur		Rempore Beauloah.	:
		District.		ensore			Turshedabad	-	Khulos		Dinajpur			Rajabahyre

	· · · · · · · · · · · · · · · · · · ·	Not etaled.	28. 28. 28. 28.	15,360				
٠		A large number of wells, costing from Ra 5,10 Ra. It, were suit. A very handsone proces well was also sunk by a private individual in the Rangpore market;	of way over their land for the canal, Two wells sunk Thirteen tanks excavated A masonry ghat	Thirteen tanks were excavated by thirteen private individuals at different villages of the district at a sotal cost of		Nit.		
		Babon Babon	Two Tribid	Third Control				
•		£	:	-	•	-		
1		Rankpore	Водта	Pubns	•	Darjiling		
•		700 Not stated	1,284	12,537		106 817 846 138		
•	•	A large and handcome pueca well was sank in the Kurgram basar by the District Board	Completion of the Jaypur-Mangalbari road by the Divisited Soad	masonry culvert at Ra. 365 A tank eleared by the Board The Local Boards excaveled two sanks at a cost of Rs. 542 and Rs. 700, respectively, and four ring wells at a total cost of Rs. 562		Constructing and clearing drains in the Terai. Improving hats in the Terai A well at Silliarri	Clearing the bazats at Kalimpong and Teesta	
		;	1	;		:	angar samunung dagaker Velipas peragebilan Arman	
,		Rungpore	Bogra	Pubna		Darjiling		
Ł	37	•	798 75					
	Construction of bricks for pures house for the Dispensary hos- pital	:	Bogra Charitable Dis- pensary building A road	N	Na.	Ni		
	8 1,216 137 137 97	25.00	883	825	4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 25 20	2,860 16 160	164
	Outstraction of a truck A read A read Two read metallied Two knotchs read	98 chains of kutcha drains An earthen ting well A pucca saucar drain Four pucca outwris	Six mesonry wells A pucce takrine	Greating jungles on the sides of rough	were constructed over the river Ichanuttee for the protection of river water. Removing most from the river water. Cost of constructing a spac on the river bank A road widened A trutcha road Cost of constructing two massonry flood rates Three culverts A mandy reaccavated A lank re-excavated A track road	A nut at the daspensery Three stone drains pro- Extending "two outlet drains stone Construction of stone drains, drains with Mir- sapore stone soline, an	drain A reverence and a saucer A reverence and a drain Preparing the necessary plans, sections and esti- instee for larging a 4" inch neat-iron pipes from one spring to another Preparing the necessary plans, sections and esti-	packed for running a 4" pape from one aprime to another Layine a line of 4" cartifout pipes to carry urine Layine a line of 1" pipe and constructing a stone tank to flush the Botanical Garden drain
	Nattore	Rungpore	Bogra	Pubna	Som filtern)	Derjiling	•	
r ;		Burgpore	Bogra		Pubna	Darjilin g	•	

	1	Coet.	ä				98 88
De Dereite Teachers	DI CENTRIS INDIVIDUALES.	Nature of work.			•	NA,	Baboo Kali Nath Bose, a semindar, caravated a tank at brinagar, at a total cord of a tank at brinagar, at a total cord of the Nathala were excavated by one Hara Kristo Voddar
		District.			,	Julpaignri	Decoa
		Çet.	ä	A CONTRACTOR OF THE PARTY OF TH			
E	-		appropriation aspectator was	maker () at mington spread to the control of			:
R Distra		Fork.				÷	
IN THE INTERIOR OF THE DISPLECE.		Nature of work.				:	; ;
IS ISTER		z				i	:
IT #I	-	····					<u> </u>
		District				Julpasenri	Dacce.
	=	Coet.	Ä	The state of the s			71,000
		* ***				,	
		In progress.		PA		i	wster-supply
	Nature of work			197 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	306	N.T	
	Natur	Cost.	Be. 6,6116 66	•			해 등 : : :
IN THE TOWSE.		Completed.	Extension of the main pipe fine to provide for the first for first	which improvement to a to improvement to abeep author-house and author-house and author-house and a to a to a to a to a to a to a to a t	Repair of dispensary and Native Doctor's quarters cholora-shed latrifies, urinals, hydrans, &c. Petty repairs of municipal roads		Construction of drains Ditto of pipe of drains A drain repaired Pour lance widened Acquisition of lands for methers passage to private privice or land for drainage purpose Acquisition of land for Acquisition of land for Purchase of Dialesaury Bradges repaired Conjustion of land for Purchase of Dialesaury Bradges repaired Conjustion of land for Jurice of printing netice attention Furchase of Dialesaury Bradges repaired Conjustion and viral statistics Conjustion and viral statistics Conjustion and viral statistics Two receination sheds Two receination sheds A privy A privy A privy A privy A privy A braid conservancy Raktons shed repaired Recruit of monitors for repaired Recruit of monitors for repaired Braddes bospital repaired Recruit of monitors for repaired Recruit of monitors ground shed Braddens passage by trapaired Recruit of monitors for repai
		Name of Town,	Darjıling— coacid.	Китеопе	,	Julpaiguri	
		District.	~	· coneta		Julpaiguri	Decce

		6,457	1,966		5,050	89	
		Some 22 tanks were excavated by private individuals in different parts of the district at a total cost of	Six tanks excavated	•	In the Tangail subdivision seven tanks and a road were constructed as a c-st of Ra. 4,550 and Ra. 400 respec- ively were excessively and a road con- structed at a cost of Ra. 1,525 and Ra. 50 respectively	were excavated and three wells such at a cord of Ed. 23,153 and Ed. 30 res- pectively. A road was also con- structed at a cost of Ed. 700	20
,		Paridpore	Backerganj	•	Mynenang		
		84.64	28,130 10,411 14,584		160,8	176,8 296,4	
Acceptable to the control of the con		Besides the construction of several rillage roads, the Instrict Board of Furrection exerated 25 tanks at a total cost of	Construction of roads, bridges over khalis and roads, boundary pillar, &c., Water channels		The Local Board of Sudder sub-divi- sion excavated masonry wells, re- excavated a tank, constructed a purces ghat and a masonry well, and removed weeds, &c., of a kinal at a boal cost of Tangail and Kishoregunge constructed and re- parred roads and provided culverts	io reads at a cost of Ra. 2,384 and The Jocal Board of Reiroltons con- structed village roads, raised village stracks, deepened khalls and con- structed a purca ghåt at a total cost of	
		Faridpore	, Backerganj		Mymensing		
Manufacture and Control of the Contr	•	2,986					
emministrational angular properties of the entry of the continuous group.	N. F.	Excavation of the Jubilee tank	Mil	3/17.		Nit.	
24 07 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	7 8		900 887 179,1 646 168 168	5118 82288188728 B	956 12 145 458 80¢ stated. 531		816 816 198
Donatify engine repaired A meditors sheet Repaire to manapinal work- manapinal work- manapinal sheet a sade hosquial building and sheet Roads repaired Donating of kreet Roads repaired Donate repaired Donate repaired The ingerved The ingerved The ingerved The payment for land acquisition for a road	Constructing and metal- ling a road	Two wells sunk, Three roads constructed A road mekalled A purca culvert con- structed Two drains	A uped Three wooden bridges Three Horbury's patent latrines A barrel car Two tanks recreated A road re-metalled Two kutchs roads	A kutched repaired Three culvarts A wooden bridge constructed A wooden bridge repaired A drain constructed Brauss de-pened A pucca dain A pucca dain Drains repaired Drains repaired Cutting and clearing of jungles on readistice	Two masonry wells One ordinary well Drainage works Conservancy Five culteria and two Two foods repaired Seven temporary bridges constructed	Two new roads con- structed Roarston of Kishore- aunge bear tank Two tanks re-excavated Two fanks re-excavated Cutting and clearing of jungles heids	Roads metalled
	Namioguij	Faridpore Madaripur	1 :	Jhalskati	Tangail	Kiblofepahj Sherpur	
		Fairidpore	The applicating comment	Backerganj	Mymensing		

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App.	

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By Private Individuals.		Nature of work.		·		Nit.	A fank re-creatured Lo. excatated	Five tanks re-excavated Thirdeen tanks excavated	Net.	The semindars of Daudaness opens an unificial by pass the water the disches round the town of Bannings
		District.				Chittagong	Noakbali	Tipperah	Patna	
		Çent Control	RS.			Not stated	8	1,000	,	20,356 67,776 36,388 4,780
IN THE INTERIOR OF THE DISTRICTS.		Nature of work.				inks excavated event of Wards spe	M	A large tank was even rated at Daud- kandi by the District Board	Nil	Construction of a wooden bridge over the Tilaya river on the Gya and Navada reed Constructing original works the nature of which is not stated
		District,				Chittagong	Noakhali	Tipperah	Patna	Gys
		Cost.	Ä		ŝ	Not stated. Ditto. 41		15	2,000	417
	Work,	In progress.	Nit.	Nel.	Nil.	Construction of a fabrine construction of a road Glearing of jungles A culvert Bernoval of silt from a kutcha drain	N	A drain	Opening of a new road Construction of drains, a tridge channel, and metalline, of roads was in progress. The these works amounts to	Aris Establing of a kutchas road
	Nature of	Cost.	106 308	84 ri	Not stated 2,348	136	258 257 257 257 250 250 250 250 250 250 250 250 250 250	829	2,437 478 51 51 51 51	11.00 M
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	A good many wells sunk	tanks were escended by invition in different villages trict at a total cost of	roopt wells and a few tanks dug with the object of supplying good furthing walter to the people, no important santary works were cuted by private individuals	Some 210 well-ward 30 ponds, costing from Rs. 13 to Rs. 5,000, were exce-vaced by private individuals in different parts of the district. Bathon Bishup Frobach Narsia Sing semindar of Mediuthan, and Dellani Sebenin Hee of Betfish made vennerably libers or north-bations, the former a sun of R. 9,400 for constructing a sun, 5, graded. Sc., 9,400 for constructing a sun, 5, graded. Sc., 9,400 for constructing a sun, 5, graded. Sc., 9,400 for constructing a sun, 1, graded. Sc., 9,400 for constructing a sun, 1, graded. Sc., 9,400 for constructing a sun, 5, graded.	occavated in bla interior of the districts as a cost 2a. 100. the latter incurva as arapenditure of about 2a. 7,500 in correction to task and eight wells, and in construction in read in Bettiah sub-division in read in Fibrer wells sunk Bestdes the above other miner works were atterated at a total cost of
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Name of Town.	Jamalpore	Bhagulpore	Purseah Kissugaaj	Bngish Basar Old Maldah	Sahebganj	Cattack Jajpur Kendrapara	Poeri
Pietrie	Monghyr—	Въвсијост	Purnoah	Maldab	Southal Pergan- naha.	Outtack	Poori

Proces details	four tanks were excavited and sixty. four wells small in the Bindrack dubdivision at a total cost of 82, 535 and 82, 1,18 respectively. These works were carried out partly from the funds collected by prirate sub- surptions for distressed prople in the finoded tracts and partly by done finoned tracts and partly by done finoned tracts and partly by done formulability by the Lodging-house Committee: A sun test. A sun the binder subdivision of the district by Rais Ballanda Nath De Bainsan at a cost of	Hazaritegh Construction of roads by the Public Not stated Hazaritegh Four wells sunk	•	Lohardugga Several village roads constructed Not stated Lohardugga Three puoca wells sunk	Singblum The bundh within the Chybases Muni- cipality which constitutes the chief source of water-supply of the town was partly cleared. The amount re- quired was raised by private sub- scription, amounting to 2s. 1,337, of which Es. 1,738 was expended during the last rest.	Choorico and Nowr s were completed duri cost of Ha. 1,488 as ctively	
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		:	i	E To E	i i	Contribution made by the municipality for the construction of Jubilee Town Hall and Municipal or capal office building A well sunk Jonstruction of a dis-	er ditto

OFFICE OF THE SANY, COMMR. FOR BENGAL, The 24th May 1890.

Sanitary Commissioner for Bengal.

APPENDIX No. IV.

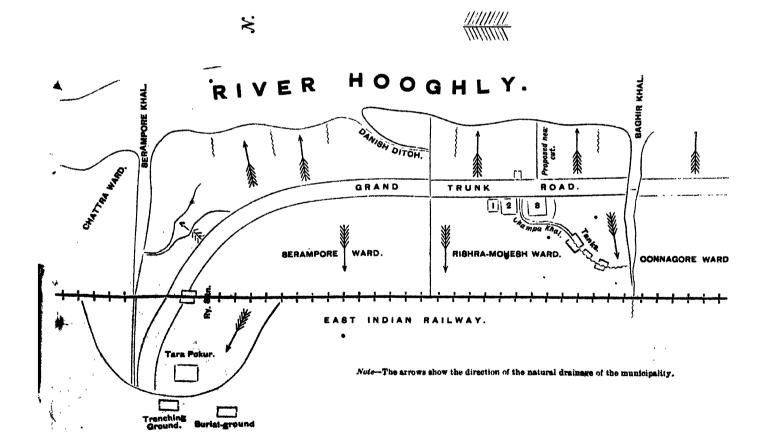
INSPECTION REPORTS OF THE SANITARY COMMISSIONER ON THE TOWNS VISITED BY HIM IN 1889.

SERAMPORE MUNICIPALITY.

I INSPECTED the Serampore Municipality on the 12th, 13th, 14th, and 15th January 1889. On the afternoon of the 12th I was chiefly engaged in interviewing some of the principal residents of the place: a portion of the time was also spent in inspecting some of the drains. On the 13th, as previously arranged, I inspected the municipality all day long in company with the Chairman, Baboo Troylokhanath Mitra, D.L., and the Conservancy Inspector, Mr. Alexander, both of whom spared no pains in showing me all over the place. On the morning and forenoon of the 14th, in company with the Civil Surgeon, Dr. Barker, who takes a great deal of interest in sanitary matters, and the Conservancy Inspector, I inspected the Sarampore ward and other portions of the municipality: the afternoon was spent in the Municipal Office with the Vice-Chairman, Rai Kader Nath Chatterjee Bahadoor, looking through the records and talking over the affairs of the municipality. I also interviewed a number of gentlemen, both European and native, on the 14th. The 15th was also spent in inspecting the municipality, chiefly the Mahesh and Rishra ward, and in interviewing several persons interested in the sanitary arrangements of the town.

2. Serampore was formerly a Danish settlement, and remained so until 1845, when, by a treaty with the King of Denmark, it was transferred to the East India Company. The town is on the East India Railway, 13 miles distant from Calcutta, and is a favourite resort of people whose business lies in the city. It is situated on the west bank of the river Hooghly, opposite Barrackpore, and is bunded on the north by the Bydabati Municipality, on the south by the Kotrung Municipality, on the east by the river Hooghly, and on the west by the East Indian Railway. The municipality was established in the year 1865 under Act III (B.C.) of 1864, and is now governed by Act III (B.C.) of 1884. It is divided into four wards, viz., Chattra, Serampore Proper, Rishra and Mahesh, and Connagore, and is composed of 18 Com-Chattra, Serampore Proper, Rishra and Mahesh, and Connagore, and is composed of 18 Commissioners (including the Chairman), 6 of whom are appointed by the Government of Bengal, and 12 elected by the rate-payers of Serampore. The area of the municipality is about 5 square miles, being about 5½ miles long and about one mile broad. The population, according to the census of 1881, is 25,559, of whom 13,137 are males and 12,422 females. Classified according to religion, the population is as follows:—295 Christians, 22,800 Hindus, 2,461 Mahomedans, and 3 belonging to other denominations. The income of the municipality for the year 1887-88 amounted to Rs. 46,304, excluding an opening balance of Rs. 17,955. The expenditure during the year was Rs. 45,321. The year thus closed with a balance in hand of Rs. 18,938.

The following is a rough diagramatic sketch of the municipality:-



lvi

My first impression of the Serampore Municipality was its great extent compared with its limited resources. I was also struck with the straggling nature of the municipality which seems to be made up by the federation of a considerable number of small villages linked on to the central township of Scrampore. It is thus a difficult matter for the municipality to meet all the wants of the place, which are many. The Municipal Commissioners have, however, done something towards improving the sanitary condition of the town, but there are still numerous defects which remain to be remedied, many of which would not cost very much,

and might easily be taken in hand at once. The general result of my inspection indicates a tendency to deficiencies in every-day administration more than to shortcomings in major sanitary expenditure. The roads and communications throughout the municipality are numerous, and are kept in good order, and all that they now require are avenues of trees on all the principal thoroughfares (at present only some of the roads have been planted with trees). The general conservancy arrangements of the town are fairly satisfactory, though there is a good deal of room for improvement in this direction without extra cost to the municipality. It is proposed to improve the large municipal market, and I understand that the work will be taken in hand as soon as possible, the necessary funds having been put aside for the purpose. At present the sanitary arrangements in the market are very unsatisfactory, especially the drainage arrange-There are a number of small drains, but their levels are extremely defective, and I that in several places they were filled with some disgusting filth. The drains should noticed that in several places they were filled with some disgusting filth. be levelled and connected, if possible, with the nearest main drain. The tank in the centre of the market also requires to be attended to This will be dealt with in the present report under the head Water-supply. There are nine private markets in the municipality. The stalls are open-sided with grass roofs supported on bamboos. The markets were fairly clean, but it is very desirable that they should be surrounded by shallow drains connected with the main drains.

The arrangements with regard to the disposal of night-soil are all that can be The soil is principally trenched in grounds to the west of the Serampore railway station, at a considerable distance from the habitations of the people. Mr. Alexander, the Conservancy Inspector, deserves great credit for the thorough and systematic manner in which, under his supervision, the night-soil is buried, and the evenness with which the ground is afterwards levelled. I should be glad, however, if more attention was paid to the planting over of the ground thus manured. As pointed out in a recent circular I have issued on the subject to all municipalities in Bengal, a field once thoroughly manured with night-soil will produce a succession of crops of different kinds of vegetables, both European and native, and such plants as jute, indigo, sugarcane, mustard; in fact all strong feeders are particularly

suited to the richness of lands manured with night-soil.

7. The arrangements with regard to cremation are very satisfactory. There are 13 burning ghâts and 4 ghât mohurirs. I do not, however, think that there is any necessity for so many ghâts: 4 would be quite sufficient. The rest should be closed, if this can be done without any legal difficulty. With regard to Mahomedan burial-grounds, there are no public ones in the municipality, but there is a large one just outside municipal limits on the west side of the Scrampore ward. This ground is admirably situated on high land. There are 60 private burial-grounds in the municipality. I visited a number of them, and I agree with the late Sanitary Commissioner in thinking that as many of them as can be closed without legal difficulty should be closed as soon as possible, for there can be no doubt that they are highly injurious to the health of the people living in their vicinity.

8. Vaccination and registration of vital statistics are creditably carried on.

With reference to jungle-cutting, this should be done twice a year-before and after the rains. If this rule is strictly observed, there could be no cause for complaint. Of course I am not in a position to say what the town was in this respect a year ago, but during my inspection I did not observe much jungle, except in the vicinity of tanks and khalls, which will be noticed further on.

Regarding the filling up of pits (dobas), I must agree with the late Sanitary Commissioner in the opinion that the insanitary condition of Serampore is in a great measure due to the universal existence of these excavations, which are nothing more or less than objectionable cess-pits. The municipality, however, has pointed out the difficulty in filling up these dobas, and it must be admitted that it is not an easy matter. In speaking of dobas, I do not refer to tanks, the filling up of which would be seriously detrimental to the well-being of the people. As long as tanks are kept free from pollution and jungle, they are in no sense

objectionable or deleterious, but, on the contrary, a great boon to the people.

11. The greatest and most pressing want of the municipality is proper drainage, and this is a matter that seems to have been very much neglected. Dr Barker, the Civil Surgeon of Serampore, is of opinion that the drainage of the town is now in a worse state than it was 30 years ago when he first knew Serampore. The other matters which should engage the early attention of the Municipal Commissioners are improved arrangements for the supply of drinking-water in the interior of the municipality, better sanitary arrangements in bustees, and the improvements of the public latrines. I will deal with each of the subjects in the order in which I have named them; but before doing so I wish to remark that my suggestions are based, not only on personal inspection and observation, but also on the opinions of a large

number of gentlemen, both official and non-official, European and native, who have lived for some time in Serampore, and are thus in a position to know what its most argent requirements are.

DRAINAGE.

12. As already stated, the want of proper drainage is what is most severely felt in Serampore, and in my opinion this is the chief cause of the insanitary condition of the town. The natural flow of the drainage east of the Grand Trunk Road, which cuts the municipality in two, is in the direction of the river Hooghly: and the Serampare and Baghir khalls, which respectively divide the Chattra from the Serampore ward, and the Rishra and Mahesh from the Connagore ward. The natural flow of drainage west of the Grand Trunk Road is in the direction of the railway and the open paddy-fields and jallas on the other side of the railway, as shewn in the diagramatic sketch given in paragraph 2. In the municipality, west of the Grand Trunk Road, there are no proper drains, and as there is not sufficient waterway in the East Indian Railway embankment to allow the surface water to flow into the open fields and jallas on the other side of the line, it collects and stagnates in the municipality. The belt of country lying between the river Hooghly and the Grand Trunk Road has roadside and other drains, but as these for the most part are defective in level and generally out of repair, they are not of much benefit to the town. Some years ago a complete survey of Scrampore was made with the view of undertaking a thorough and systematic drainage scheme mate amounted to about Rs 80,000, of which Government promised to pay one-half, provided the municipality could raise the other half; but they were not able to do so, and the scheme fell through. There can be no doubt that, if the proposed scheme could be carried out, it would be of immense benefit to the municipality, especially in that portion of the town which lies to the west of the Grand Trunk Road. As, however, there seems to be no hope of raising the necessary funds, it is needless to say anything more about it, and the best course for the nunicipality to adopt under the circumstances is to think of some cheaper method by which the present drainage can be improved, and the land to the west of the Grand Trunk Road relieved of the water which at present collects and stagnates there—care being taken that whatever is done should be done as a part of, and in accordance with, one consistent and coherent plan, so that, if at some future date funds are available, there may be no difficulty in making what has been accomplished fit in with the drainage scheme proposed some years ago.

To start with the portion of the municipality which lies to the west of the Grand Trunk Road. It has been proposed to drain this part by a deep cut along the back of the municipality near the railway, and by a cross cut from that into the Baghir khall. Of course this would be the best means of draining the land, if the necessary funds were available, but they are not. The only alternative that suggests itself to me is to increase the outlet capacity of the culverts under the railway line, which are at present quite insufficient, so as to allow the water to flow freely into the open fields and jalias on the other side of the line This would

not cost very much.

The drainage of the Chattra and Connagore wards, which are situated at the north and south of the municipality respectively, are fairly good: the drainage of the former flows directly into the Hooghly or into the Serampore khall, and that of the latter principally into the Baghir khall and the Hooghly. All that is necessary is to repair and improve the existing drains, which are defective in many places, and in the case of the Connagore ward to in-

crease the outlet capacity of the culverts under the East Indian Railway, and to construct a cut in the north-western part of the ward to drain into the Baghir khall.

The Serampore ward also can be easily drained at a very small cost. The natural flow of the drainage in this ward is either into the Serampore khall, the river, or the old Danish ditch, which has recently been considerably improved at a cost of Rs. 3,500. This ditch is pucce at its entrance into the river and for some distance inland, having been made so in the Danish time. The other end of the ditch has lately been made pucca: the middle portion is The ditch is kept constantly flushed by a stream of clean discharge water from still kutoha. the Scrampore mill which passes into it. I was thoroughly satisfied with this ditch and its flushing arrangements. All that is necessary in the Serampore ward, east and north of the Grand Trunk Road, is to deepen the existing drains and improve their levels, which are in many cases defective.

The drainage in the Mohesh-Rishra ward, especially in the vicinity of the bustees of those names, shown in the diagramatic sketch given in paragraph 2, is much impeded, and requires immediate attention. I was informed that this locality is a great nuisance from a senitary point of view, and that this is because the drainage arrangements are so bad. In the beginning of the century a khall called the Champa khall opened into the river immediately to the north of Warren Hastings' country-house. The mouth of this khall, however, became gradually silted up, and has for many years past been completely obliterated, the site being now occupied by a large house belonging to the Hastings Mill Company. The rest of the khall remains as it was originally, and the old culvert on the Grand Trunk App. IV.] lviii

Road which crosses the khall is still in existence. Following this khall, it will be seen from the diagramatic sketch that it passes between the bustees numbered 2 and 3 (which are very thickly populated), it then turns in a southerly direction and skirts bustee No. 3, and from the south-west corner of this village passes in a south-westerly direction through four or five tanks into the Baghir khall which separates the Mahesh and Rishra from the Connagore ward. The Champa khall is supposed to drain the villages in its vicinity, but as a matter of fact it does not, and cannot possibly do so properly under existing circumstances. At present the greater part of the surface drainage from these villages which finds its way into the khall stagnates there, because the khall cannot be properly flushed. An excellent kutcha drain from the Hastings Mill brings the discharge water from that mill into the Champa khall, which it joins at the south-west corner of No. 3 bustee. The major portion of this water flows along the khall into the tanks through which the khall passes, but a portion of it also flows in the other direction of the khall which has no outlet. It will thus be seen how seriously the drainage in this locality is impeded. I had a long conversation on the subject with Mr. James Struth, the Manager of the Wellington Mill, who takes a great deal of interest in drainage and other matters relating to sanitation, and who very kindly accompanied me in my inspection of the drainage arrangements of this locality. We came to the conclusion, after a careful and thorough consideration of the subject, that the only way to drain the Mahesh and Rishra bustees satisfactorily is by opening a three-foot drain from the Grand Trunk Road to the river between the Wellington and Hastings Mill. The proposed drain could be connected with the Champa khall by means of a culvert under the road, if the existing culvert will not answer the purpose. It will also be necessary to construct a sluice gate at the south-west corner of No. 3 buste

WATER-SUPPLY.

13. The people of Serampore obtain their supply of water from the river Hooghly and from tanks, of which there are a great many in the municipality. Some of them contain good water, but a great many do not, and as none are specially reserved for drinking purposes, there is always the danger of their being polluted in various ways. As a matter of fact this is actually the case in several tanks, as will be noticed further on. The question of introducing a filtered water-supply into the town has often been urged on the municipality, who are fully aware of the importance of such a scheme, but the question is one of ways and means. The municipality has no available funds at present, and there seems to be no chance of raising a loan for the purpose, even if it were desirable to do so. There seems, however, to be no urgent necessity for such a scheme. The river Hooghly is available to a great part of the town for drinking purposes, and in this respect Serampore is much better off than most mufacil towns. At certain seasous of the year it is true the river water is turbid and contains a quantity of silt, but the people leave a very cheap and easy process of clearing it. The water is collected in earthen vessels and allowed to stand, a small quantity of alum and a kind of nut called nirmul being put into it, in order to purify the water and cause the sediment to settle quickly. So far therefore as the people living in the vicinity of the river are concerned, special arrangements for water-supply are not immediately needed, but for those parts of the town which are not within easy reach of the river, the case is different, and it should be the duty of the municipality to provide them with a supply of good drinking-water. I was informed that the Commissioners are now engaged in reserving tanks for drinking purposes; this matter should be pushed on as soon as possible, so that before the hot tweather sets in some tanks at least may be reserved. No greater boon could be given to the poor people, and nothing would be receive

of poor people flocked to the hydrants, and after the epidemic had subsided, the people of Mahesh and Rishra presented Mr. Finlay with the following touching address as a token of their gratitude for his efforts in their behalf :-

John Finlay, Esq.,

Manager, Hastings Mill, Serampore.

DEAR SIR,

WE, the people of Mahesh and Rishra, beg to tender you our most sincere thanks for the generous assistance rendered by you to the sick and helpless on the occasion of the recent fearful outbreak of cholera in our neighbourhood, when over 200 people were swept

Your noble and self-sacrificing efforts to relieve the sufferings of the poor afflicted people

are beyond all praise, and have earned our warmest thanks and deepest gratitude.

It is men like you that uphold the high character of the British nation in India, and

endear themselves to the people amongst whom they dwell.

We pray God that he may bless you to live long among us, and grant you children and grandchildren, who will boast of their ancestors when we will be all out of sight.

We remain,

DEAR SIR,

The 11th January 1885.

Yours most faithfully,

There is no doubt that the Municipal Commissioners would also earn the gratitude of the people, besides feeling a sense of satisfaction at having done their duty, if they were to reserve as many of the best tanks as possible solely for drinking purposes. This might easily be done by a Committee of Ward Commissioners. At present there are only two municipal tanks in Serampore, neither of which seem to be reserved for drinking; the rest are private property, and many of these are kept in a disgustingly filthy state. The largest are private property, and many of these are kept in a disgustingly fifthy state. The largest and best tank in the municipality is the Tara Pokur, belonging to the well-known Roy family, who freely allow all persons to draw water from it; but even this tank is not reserved for drinking purposes. There is also a large tank at Acnapara, which might with advantage be taken up, or, if funds will not permit of this, it might be leased by the municipality and set apart for drinking purposes. To the west of the railway station there is a large tank belonging to the Railway. It is at present very much neglected. Water-plants and weeds have been allowed to grow in it to such an extent that the water can scarcely be seen. The tank is also polluted in several ways. A drain from the adjoining bustees carries much tank is also polluted in several ways. A drain from the adjoining bustees carries much of the liquid filth of the bustees into the tank, which is thus rendered most unwholesome. This should be stopped at once, and the Railway authorities requested to clean the tank as soon as possible. Another tank which is very much neglected is the tank in the Serampore ward (a very thickly-populated locality), west of Kulbagan Street. This tank, which is probably the worst in the municipality, is about 60 feet long and 50 feet wide, with a depth of water of about 9 feet. Houses, both pucks and kutchs, are built around three sides of it, and a large portion of the drainage from these habitations flows into the tank. But worse than this, there are three latrines in constant use, actually built on the slope of the tank, a few feet from the water's edge. As almost all the liquid and much of the solid excreta from these latrines must find its way into the tank, it can easily be imagined in what state the water must be. As a matter of fact, I noticed several feet of thick semi-fluid filth round the margin of this tank. There is also a considerable amount of jungle on the banks of the tank, which is commonly used as a night-soil ground. I could not have believed it possible that such a tank existed in the municipality. The latrines referred to should be removed at once from the immediate vicinity of the water; the jungle should be kept constantly out, not only in this, but in other tanks and khalls where at present it is allowed I could not have believed it to grow, and the banks of the tanks should be raised so as to prevent inward drainage from the surrounding houses. There is a large and deep tank in the centre of the Municipal Market which requires attending to. The water at present is not good, as a good deal of the surface water from the market finds its way into it. The banks of this tank should be raised so as to prevent inward drainage.

BUSTEES.

With regard to overcrowding and general sanitation in bustees, my attention was particularly drawn to a compound situated at No. 11, Strand, where a number of lodging-houses for coolies who work in the adjoining mill have lately been erected. The sheds themselves are well built and nicely arranged, but the latrine arrangements in the compound are very bad. The smell emanating from the place was sickening, and I do not wonder at the people in the neighbourhood complaining as they do. The municipality should insist on proper sanitary arrangements being carried out in this locality. I also noticed that there was a good deal of overcrowding in the bustees connected with the Hastings and Wellington mills, and in those in the northern portion of the Chattra ward. I am perfectly aware that it is exceedingly difficult to interfere with the existing arrangements as far as the huts are concerned, but there is no reason why the drainage of these bustees, which is at present very far from satisfactory, should not be improved. This might easily be done at a comparatively small cost to the municipality.

LATRINES.

15. There are nine public latrines situated in different parts of the municipality. They are constructed of half-burnt brick, and are defective in design, and in other respects objectionable. It is, however, impossible at present for want of funds to replace all of them by new iron latrines, but this should be done as soon as funds allow. In the meanwhile I think it is very desirable that three new iron latrines should be constructed—one near the railway station about 100 yards down the road which runs south along the railway line towards Connagore, another in the Chattra Bazar Road in place of the present mat latrine there, which is most objectionable, and one near the Municipal Market. At all these places latrines are urgently needed, as being the only means by which much of the open air defeccation which is carried on in those localities can be put a stop to. Iron latrines are preferable to half-burnt brick, or even pucca ones, as they are simple, easy of construction, durable, easily cleaned, and perfectly free from saturation.

16. In conclusion, my acknowledgments are due to Mr. F. W. Duke, the Subdivisional Officer of Serampore, for many valuable hints and suggestions; to Baboo Troylokhanath Mitra, D.L., the Chairman of the Municipality, for the trouble he took in accompanying me over the municipality, and for the assistance he afforded me in the course of my enquiries; to Rai Kedar Nath Chatterjee Bahadoor, the Vice-Chairman of the Municipality, for allowing me access to the records of the Municipal Office, and for explaining and bringing to my notice many matters in connection with the affairs of the municipality which I could not otherwise have known; to Baboo Nundolal Gossain, one of the leading members of the municipality, who afforded me similar assistance to that given by Rai Kedar Nath Chatterjee Bahadoor; and to the other gentlemen mentioned in the body of this report for the assistance

alluded to in each case.

W. H. GREGG, M B.,

The 22nd January 1889.

Offy. Sanitary Commissioner for Bengal.

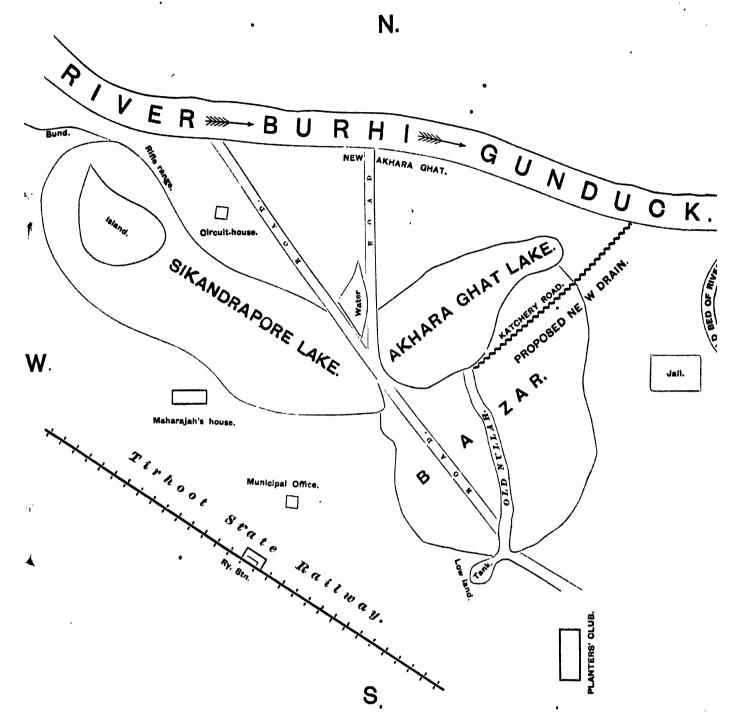
MOZAFFERPORE MUNICIPALITY.

I INSPECTED the Mozafferpore Municipality on the 23rd, 24th, 26th, 27th, and 28th January 1889. The Chairman, the Secretary to the Municipality, and several of the Municipal Commissioners accompanied me at different stages of my inspection. I also interviewed several residents of the place, both official and non-official, interested in the sanitary

arrangements of the town.

2. Mozafferpore, so called after its founder Mozaffer Khan, is charmingly situated on comparatively high land on the south bank of two large and beautiful lakes called the Sikandrapore lake and the Akhara Ghât lake. These lakes originally formed the bed of the Burhi Gunduck river, which now flows about half a mile north of the town. The larger of these lakes has been bunded in order to keep in the water, and there are two or three sluice gates in the bunds to let in river water when necessary. The Maharajah's house, the club, and most of the best houses in the station are built on the shores of the Sikandrapore lake, while the bazar, which is large and picturesque, and a few of the finest houses are situated on the south bank of the Akhara Ghât lake. The municipality of Mozafferpore was established in the year 1864 under Act III (B.C.) of 1864, and is now governed by Act III (B.C.) of 1884. It is divided into six wards, and is composed of 18 Commissioners and a Chairman who is appointed by Government. One-third or six of the Commissioners are also appointed by Government, the remaining two-thirds or 12 are elected by the rate-payers. The average length of the town from north-west to south-east is two miles and-a-half, and its breadth is two miles. It has an area of about 5 square miles. The population of the town, according to the census of 1881, is 42,742, of whom 23,084 are males and 19,658 females. Classified according to religion, the population is as follows:—233 Christians, 30,028 Hindus, and 12,481 Mahomedans. The income of the municipality for the year 1887-88 amounted to Rs. 33,368, excluding an opening balance of Rs. 33. The expenditure during the year was Rs. 32,007. The year thus closed with a balance in hand of Rs. 1,394 only.

8. The following is a rough diagramatic sketch of the most thickly-populated portion of the municipality:—

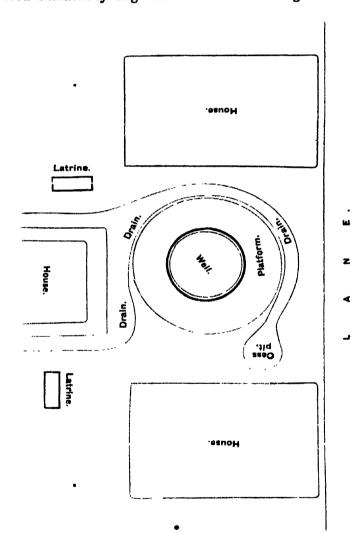


Mozafferpore is a beautiful old town, and from its situation and natural advantages should be one of the most salubrious in Bengal, but this is not the case, and I think the cause is to be found in the manner in which, of late years, the sanitary arrangements of the town have been neglected. What struck me more forcibly than anything else was the wilful pollution of wells and tanks from which the greater part of the population of the town obtain their supply of water for drinking and culinary purposes, and the systematic and permitted pollution of the water of the Akhara Ghât lake. The drainage arrangements of the town are also a source of danger to the inhabitants, inasmuch as they are at present one of the chief sources of the water pollution alluded to above. The arrangements with regard to registration of vital statistics and vaccination are also unsatisfactory. I will deal with each of these subjects in the order in which I have named them, but before doing so I wish to remark that I feel convinced that if the Municipal Commissioners displayed a little more activity and interest in sanitary matters than they appear to have done in recent years, they could, at a comparatively small cost, very soon remedy the existing defects, and make the town one of the most attractive and healthy, as it is already one of the most picturesque in Bengal; and in drawing the attention of the municipality and others concerned or interested in the cause of sanitation to the defects noticed by me in the course of my inspection,

I would earnestly urge them to use their influence, and to devote a portion of their time, their talents and their experience to matters of sanitation and improvement.

WATER-SUPPLY.

4. In most of the districts in Bengal Proper the greatest and most pressing want is good drainage. In Behar the want of good drinking-water is most severely felt. The European residents of Mozafferpore obtain their supply of drinking-water from the river Burhi Gunduck, which flows about half a mile to the north of the town. By means of filtration this water is rendered telerably pure, and the European population do not seem to suffer in any way from its use. The majority of the natives, however, will not use the river water for drinking purposes, because they believe it causes goitre. It is a fact that the river water, which comes down with large quantities of silt from the Himalayas, is largely impregnated with various salts, and it would seem that goitre is a prevalent disease among the inhabitants of the country watered by the Burhi Gunduck, especially among those living north of the river. The natives of Mozafferpore obtain their supply of drinking-water from wells, of which there are a very large number in the municipality, many of them having been provided for the benefit of the poor by the munificence of the residents of Mozafferpore and its neighburhood. I am sorry to say that these wells have in recent years been shamefully neglected and allowed to get into a disgustingly filthy condition by those



whose duty it was to keep them clean and free from pollution. In many instances they are sur-rounded by house drains, a large portion of the contents of which undoubtedly finds its way by percolation, and in some instances trickles directly into the wells, carrying with it the germs of cholera, which dreadful disease manifests itself year after year with such fearful severity in Behar, particularly in the months of June and July. A typical example of the permitted pollution in this way of well water in Mozafferpore is seen in the case of the well situated at a place called Seraigunge, one of the most thickly populated local-ities in the municipality, which I visited in company with the Secretary to the Municipality. The diagram given in the margin shows the position of the well and its surroundings. The drain encircling it carries all the cookroom washings and other liquid refuse from the houses near by, together with a large portion of the urine, &c., from the latrines, which it will be observed are situated on the sides of the drain, into the cesspit. From the drain, but more partioularly from the cesspit, which was a heaving mass of crawling maggets when I saw it, emanated the most disgusting and overpowering stench that it is possible

to conceive. This is a true illustration of the position and surroundings of most of the wells situated in the thickly populated portions of Mozafferpore, and the manner in which they are rendered liable to pollution. In these circumstances can it be wondered at that cholera is present in the town nearly all the year round? Water contaminated as the water of these wells are must undoubtedly be a prolific source of cholera and other diseases. The immediate attention of the Municipal Commissioners is invited to the surroundings of the wells in the municipality. All cesspits should be removed from the vicinity of wells, the margins of which should be kept as clean and the water as free from pollution as possible. House drains should be diverted in some other direction, and on no account allowed to be constructed around or near the wells. With regard to the water of the lakes, the Sikandrapore lake, except its eastern portion near the bazar, is kept fairly clean, but the Akhara Chât lake is at present contaminated by the discharge into it of the contents of the main drain of the bazar, by the promiscuous use of its banks as a night-soil ground, and by the washing of clothes, &c., in the water. All these objectionable practices should be stopped, and the

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besar main drain diverted as recommended in the portion of this report relating to drainage. The jungle which at present abounds on the shores of this lake and in the eastern portion of the Sikandrapore lake should also be removed. It would also be of great advantage if a bund with a sluice gate were constructed along the eastern portion of the Akhara Chât lake, similar to that constructed at the northern portion of the Sikandrapore lake, so as to let in fresh water from the river when necessary, and keep the lake water as pure as possible. These two beautiful sheets of water are well worth the small expense of keeping them pure and good, and if this were done, it would be a great boon to the poor people during the hot and dry season of the year when many of the wells dry up and good drinking-water is scarce.

DRAINAGE.

5. The natural flow of the drainage of Mozafferpore is in an easterly direction, but nearly the whole of the drainage of the bazar, which is the most thickly populated portion of the municipality, at present flows into an old nullah which runs through the bazar, and is connected at one end with the Akhara Ghât lake and at the other with a tank situated in low lying land. The depth of the nullah varies from less than three feet in some places to more than six feet in others. Its width also varies from about four to seven feet. It is objectionable and quite unnecessary that the bed and width of this nullah should be so uneven, and I would strongly recommend that the deeper portions be filled up and a uniform depth of about three feet secured. I am aware that during the rains many tanks are filled by means of this nullah, but the proposed alteration will in no way affect this arrangement. It has already been remarked in the preceding paragraph relating to water-supply, that the water in the Akhara Ghât lake is at present polluted by the discharge into it of the bazar drainage through the nullah referred to above, and that this objectionable practice should be stopped. I would propose that the nullah be connected with the river below the town by means of a cut about three feet deep and three feet wide along the katchery road as shown in the diagramatic sketch given in paragraph 3. The cost would not be much, while the advantages to be derived from it would be very great. Not only would it improve the sanitary condition of the bazar (the smaller drains in which could easily be connected with the proposed new drain), but it would also improve the condition of the Akhara Ghât lake, and raise the value of the surrounding property. A very good pucca drain, 500 feet long, has recently been constructed in the eastern portion of the bazar, and connected with the nullah at its northern end.

REGISTRATION.

6. The registration of vital statistics has been very much neglected in this municipality. There has certainly been an improvement in registration during the year 1888 as compared with the previous year, but there is still a palpable deficiency in the accuracy of the statistics supplied, the effect of which is to completely vitiate any conclusion which may be drawn from them as to the general health of the town. It should be remembered that accurate registration of births and deaths fulfils many useful purposes, not the least among which is that it furnishes to medical and sanitary science information of the highest value concerning the state of the public health. By means of registration efficiently conducted, the sanitary authorities of any locality are promptly informed of the prevalence of preventable disease, and are thus enabled to take the necessary measures for the protection of the public health with the least possible delay. Moreover, registration reports, taken in connection with the census, yield statistical results, which throw light upon the casual conditions under which prevailing diseases occur, and thereby prove an invaluable contribution to the science of preventive medicine. I would invite the special attention of the Municipal Commissioners to the necessity of more carefully discharging this important part of their duties. The present system should be enquired into, reorganized and placed on a sounder basis.

VACCINATION.

7. This is a matter which also requires more attention than the Municipal Commissioners have latterly given to it. Last year my predecessor remarked in his inspection report of Mozafferpore that vaccine operations were making fair progress, and he expressed the hope that they would be carried out with like or even greater activity year by year. It appears, however, from the returns which have been received in this office that only 1,608 operations were performed during the year 1888 against 1,820 in the previous year. The decrease in 1888 is not creditable to those responsible for the progress of vaccination. The Compulsory Vaccination Act is in force in Mozafferpore, and incculation is prohibited by law. There should therefore be no difficulty in encouraging and, if necessary, enforcing vaccination. This is especially necessary, as inoculation has not yet been prohibited, and is largely practised in the surrounding districts of Sarun, Chumparun, and Durbhangah. I believe it is also still looked upon with more favour than vaccination in many parts of Mozafferpore. Before, however, any advance can be made in vaccination, its advantages over inoculation should be clearly explaned to the people by those entrusted with the duty of carrying on vaccination. The great merit of small-pox inoculation is that it communicates the disease as a rule in a mild form, and affords protection to the individual from a sweetent as one attack of small-pox naturally contracted exempts the individual from another. On the other hand, the great defect of small-pox inoculation is that it produces small-pox, and thus disseminates that disease from so many distinct centres of infection according to the extent and frequency of the practice. For, whilst it undoubtedly affords

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protection to the individual operated upon, it equally exposes all those who are not similarly protection to the individual operated upon, it equally exposes all those who are not similarly treated at the same time, or who are not protected by a previous attack of small-pox, to the imminent risk of contracting the disease by infection, with all the dangers and deformities attendant thereon. In short, small-pox inoculation affords safety and protection only to the inoculated, but is a grave danger to the rest of the population not already protected by a previous attack of small-pox. It is this fact which nullifies the practical utility of small-pox inoculation as a prophylactic agent of general applicability, and which prohibits its use altogether in the presence of vaccination. Because the one produces a highly infectious disease which, thus contracted, runs a more or less dangerous, destructive, or fatal course; while the other produces a very mild cilment which is not infectious and is communicable. whilst the other produces a very mild ailment which is not infectious, and is communicable only by inoculation. These great advantages of vaccination soon gave it the mastery over small-pox inoculation, and it is now acknowledged throughout the civilized world as the only true prophylactic against small-pox: simply because, whilst it secures protection from small-pox only to the individual subjected to its inoculation, it does no injury to his neighbour by exposing him to the infection of small-pox.

MISCELLANEOUS.

The roads and communications throughout the Mozafferpore Municipality are numerous and are kept in good order; all that they now require are avenues of trees on all the principal thoroughfares, and if the bunds were also planted with trees, it would greatly imprive the appearance of the town. The markets are kept fairly clean, and require no special mention at present. The public latrines are constructed of half-burnt bricks, and are defective in design and in other respects objectionable. It is, however, impossible at present for want of funds to replace them by new iron latrines, but this should be done as soon as funds permit. Iron latrines are preferable to half-burnt bricks or even pucca ones, as they are simple, easy of construction, durable, easily cleaned, and perfectly free from saturation. The night-soil is at present buried at a very great distance from the bazar, and I have reason to believe that it is not always carried to the trenching ground, but is thrown by the mehters into ditches and excavations on the way. If possible, a site nearer the bazar should be selected.

W. H. GREGG, M.B.,

The 15th February 1889.

Offy. Sanitary Commissioner for Bengal.

SOUTH DUM-DUM MUNICIPALITY.

No. 1400, dated Calcutta, the 23rd February 1889.

From -W. H. GREGG, Esq., Sanitary Commissioner for Bengal, To-The Secretary to the Government of Bengal, Municipal Department.

In compliance with the orders of Government, No. $M_{\frac{3B}{4}}^{3B}$ 8, dated the 8th instant, I have the honour to submit the following report regarding the insanitary condition of portions of the South Dum-Dum Municipality, surrounding the Dum-Dum Cantonment, which has recently formed the subject of correspondence between Government, the Military authorities, and the South Dum-Dum Municipality through the Commissioner of the Presidency Division.

Padrihatta Villago, and parts of villages Satgachee, Nager Bazar, Digla, and Digla Nyabusti.

2. The Military authorities, in the letter from the Cantonment Magistrate, to the Magistrate of the 24-Pergunnahs, No. 98CJ, dated the 18th May 1888, complain that the area in question, which comprises the villages named in the margin, abounds in filthy tanks, pits and water-holes, which are never cleaned, and

are used among other purposes, for the deposit of filth and refuse. It is also stated that there are no public latrines, no establishment for the cleansing of privies and the removal of excreta, and that as the people mostly resort to fields, patches of jungle, covered waste lands, ditches and pondsides for purposes of nature, the air is heavily laden with feecal odour, and the stench at times is almost unbearable. It is also stated that well-privies exist in the municipality, and that these are never cleaned; that the arrangements with regard to the slaughter-house are most objectionable; that the number of pigs kept in bustees are a source of considerable nuisance; that the cow-houses and sheds are in a very insanitary condition and that no provision has been made for a public burial-ground. On the whole, the military, authorities are of opinion that the portion of the South Dum-Dum municipality surrounding the cantonment is dangerous to the health of the troops in garrision at Dum-Dum, and that it is desirable, for the safety of the troops, that the area in question should be withdrawn from the municipality included within cantonment limits. The Padrihatta village, which lies immediately south of the cantonment within a couple of hundred yards from the European barracks, is said to be in the worst condition. It is stated that from the manuer in which the huts are crowded together there is no means of draining the place,

or keeping it clean, even if the municipality possessed any establishment for the purpose, and that the spaces behind and between the huts are being filled up with filth and refuse.

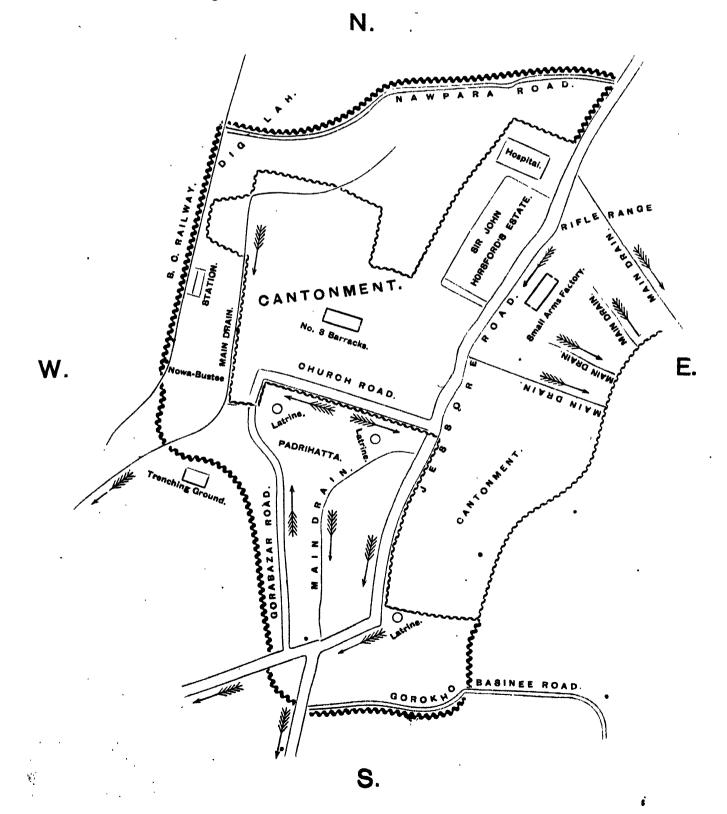
3. I inspected the municipality on the 17th, 18th, and 20th instant, and in the afternoon of the 19th idem I discussed the affairs of the municipality with the Chairman, Mr. A. M. Bose, who spared no pains in bringing to my notice even little matters of detail.

Mr. Bose accompanied me in my inspection on the 17th. On the 18th I again went over the

localities in question. At one stage of my inspection I was accompanied by Lieutenant-Colonel Sterndale, the Cantonment Magistrate, who was kind enough to grant me a long interview, at which we discussed the condition of the cantonment and the adjoining portions of the South Dum-Dum Municipality. I also had the advantage on the same date of an interview with Colonel Harrison, the Commanding Officer at Lum-Dum, who takes a great interest in sanitation, and is most auxious to do all he can for the benefit of the health of the troops committed to his charge. On the 20th I visited Dum-Dum for the third time, chiefly with the object of ascertaining to what cause the present outbreak of typhoid fever among the troops is due. I visited the hospital in company with Dr. T. J. P. Holmes, the Medical Officer in charge of the cantonment, and thoroughly inspected with him the drainage arrangements both in the cantonment and in the municipality.

4. The following is a sketch of the cantonment and of that portion of the South Dum-Dum Municipality which is the subject of the present correspondence. The present boundary of the cantonment is marked by a thin waved line, and the portion of the South Dum-Dum Municipality, which it is proposed to include in cantonment limits, is shown by a thicker waved line. The main drains are also marked, and the arrows show the direction of

the flow of the drainage:-



5. Before describing the condition of the cantonment and the municipality as I found them, I beg to be allowed to remark, with reference to the proposal to include the area complained of within the cantonment limits, that even if this could be done without the consent of the Municipal Commissioners, which they have refused to give, it would not in my opinion be of much advantage to the cantonment. The fringe of villages or bustees, the condition of which is now regarded as a source of danger to the health of the troops, would, in a very short time, be formed on the borders of the extended area of the cantonment, and the nuisances, instead of being done away with altogether, would only be removed a little further off to a distance which would probably make no appreciable difference. Improved sanitation is what is required in the area in question, and this could, in my opinion, be secured as well under municipal as under military control. The Commissioners of the South Dum-Dum Municipality are, I understand, both willing and anxious to do all that lies in their power and within their limited resources to meet the wishes of the Military authorities. The Dum-Dum Cantonment is at present occupied by the Buffs, one of the most distinguished of the British regiments; and, as I pointed out to the Chairman of the Municipality, the health of the troops must be the first consideration, and that Government would not permit it to be endangered

by insanitary conditions outside cantonment limits.

The complaints made by the Military authorities originated in the annual report for 1887 of the medical officer in charge of the cantonment, and the report of the Cantonment Magistrate on the subject was written on the 18th May 1888. Since then the municipality has done something, though perhaps not as much as they might have done, towards improving the sanitary condition of the area in question. On the whole, however, I think the cantonment authorities had, and still have, reasonable grounds for complaint, although, as I shall show further on, the municipality can plead extenuating circumstances. I shall now proceed to describe the conditions of the municipality as I found it in February 1889. The roads and lanes are fairly good, and it is satisfactory to observe that a good many of the pits and water-holes complained of by the Cantonment Magistrate have recently been filled up, but the surrounding condition of the bustees is still unsatisfactory, and should be attended to at once. There are still a large number of dirty tanks, the banks of which in many cases are broken, so that the drainage from the adjoining houses easily finds its way into them There is also a good deal of jungle not only on the sides of the tanks, but also around latrines and bustees, which in some places is used as a night-soil ground. This is a very objectionable practice, and should be put a stop to at once and the jungle cut. There are also a few objectionable practice, and should be put a stop to at once and the jungle cut. tionable well-privies in Digla. which should be removed immediately. Such a thing as a well-privy should not be allowed to exist in a municipality. Hitherto the want of public latrines may have been an excuse for the defilement of the ground and the air by promiseuous latrines may have been an excuse for the deficient of the ground and the air by promiscuous defectation, but three good public latrines are now being provided in the most thickly populated portion of the municipality adjoining the cantonment—two in Padrihatta and one in Kajipara. These should be brought into use as soon as possible. More latrines are wanted in other portions of the municipality, and these should be provided as soon as funds permit. The municipality has been charged with great dilatoriness in providing the public latrines referred to above; but if what I have been told is correct, I do not think they can be blamed for the delay. The Chairman informed me that so long ago as April 1887, he made the necessary application for the acquisition of the land required, but it was not till October 1888 that the municipality got possession of it. Many of the private privies in the municipality are municipality got possession of it. Many of the private privies in the municipality are most objectionable, and the night-soil from them does not appear to be removed regularly. The municipality have a conservancy establishment consisting of two mebters and a cart; but as there is no special officer to supervise the work, it is not satisfactorily done. The appointment of a Conservancy Inspector is absolutely necessary, and I am surprised that there is not such an officer in the municipality. It appears that in their budget estimates for the current year the municipality proposed the appointment of a Conservancy Inspector, and provided the necessary funds, but the proposal was negatived by the Commissioner of the Presidency Division, and the expenditure disallowed on the ground that a whole-time officer was not necessary, and that the tax-darogah should do the work in addition to his own duties. It is impossible for the tax-darogah to do the work of a Conservancy Inspector in addition to his own duties, and I am decidedly of opinion that a whole-time Conservancy Inspector should be appointed without delay. Until such an officer is appointed, and Part IX of the Municipal Act, relating to the cleansing of latrines, is introduced into those portions of the municipality surrounding the cantonment, it is almost hopeless to expect an improvement in the sanitary condition of the place. The only portion of the area in question where it is doubtful whether Part IX of Act III of 1884 should be introduced is the tract of country lying to the north of the cantonment. The population there is sparse, and the people so very poor that a latrine-rate would probably press very heavily on them. There is besides no urgent necessity to introduce the Latrine Act into this part of the municipality, as there is an open space between the bustees and the cantonment boundary which is not occupied. As regards the cowsheds and slaughter-house in the municipal area, which is the subject of this correspondence, I am of course not in a position to know what their condition was last year, but they certainly are not now in an unsatisfactory state. On the contrary, I was pleased with the existing arrangements, and think the municipality deserve credit for the manner in which the cowsheds are kept.

As regards burial-grounds, the Cantonment Magistrate stated in his letter of the 18th May 1888 that in Digla the practice of burying the dead in close proximity to the houses of the living prevails, and that there are no public burial-grounds. As a matter of fact, there

are six registered burial-grounds within the municipality, two of them being in Digla, and the Chairman informs me that private burials have been prohibited, not only in Digla, but throughout the municipality.

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The pig nuisance complained of is, I fear, somewhat exaggerated. On enquiry into the matter, I found that pigs are kept only in the portion of the municipality to the north of the cantonment. So long as the pig styes are kept clean, I do not see that they are much of a

nuisance.

As regards drainage, the main drains in the municipality are well situated, and only require to have their levels, which are defective in many places, improved. The bustee drains are the most objectionable at present, and require early attention. These should be properly levelled and connected as far as possible with the main drains. The work could be done at a comparatively small cost with the aid of Baboo Nilmany Mitter, an Engineer, who is also a Municipal Commissioner This gentleman, I believe, has already suggested certain improvements in regard to bustee drainage, which are now being carried out under his supervision.

The only other matter remaining for me to report upon is the very serious and alarming outbreak of typhoid fever, which is at present raging in the Dum-Dum Cantonment. Up to date (20th February) there have been 17 cases (one an officer), of which two have already proved fatal. There are also nine men in hospital, who, it is feared, are sickening for typhoid. This unfortunate outbreak, coming as it does just at the time when there is a controversy between the Military authorities and the Municipality about the condition of the area surrounding the cambonment, might be attributed by the former to the insanitary condition of this area; but there is ample evidence to show that typhoid fever had broken out in the regiment before it came to Dum-Dum, and this is admitted by Dr. Holmes, the Medical Officer in charge. The regiment came to Dum-Dum from Lucknow in three drafts. The first draft arrived on the 15th January, the second on the 23th January, and the third, which was the largest draft, on the 4th February. Immediately on arrival, some of the men who are at present suffering from typhoid fever, and the two cases which have proved fatal, were admitted into hospital. It also appears from the hospital case-book, which is inspected, that one of the deceased was unwell before he left Lucknow. It will thus be seen that the outbreak did not originate in Dum-Dum. I considered it desirable, however, to inspect the draining and other arrangements in the cantonment, and Dr. Holmes very kindly accompanied me in my inspection. Nothing could be more satisfactory than the conservancy arrangements of the cantonment, which is kept as clean as a cantonment should be kept, but the levels of the drains require attention. The drainage system was evidently prepared with great care and judgment, and it is a pity that some of the drains have in recent by an opportune rainfall of 133 inches in the 24 hours preceding my inspection. Dr. Holmes and I observed water-logging in many of the drains. I am aware that the cantonment lies very low

REPORT ON THE OUTBREAK OF CHOLERA IN THE DARJEELING HILLS.

No. 4398, dated Calcutta, the 13th July 1889.

From—Surgeon-Major W. H. Gregg, Sanitary Commissioner for Bengal, To—The Secretary to the Government of Bengal, Municipal Department.

With reference to your demi-official of the 23rd May, I have the honour to submit the following report regarding the outbreak of cholera in the Darjeeling Hills:—

There were three distinct outbreaks into which I enquired, viz.,—

(1) The outbreak in the late Dr. Smith's family at Kurseong, which caused four deaths, including Dr. Smith;

(2) The outbreak on the Darjeeling-Himelayan Railway at Tindaris, which caused the death of one European engine-driver; and

(3) The outbreak in the Mahanuddy valley, which was the severest of the three outbreaks. All the victims in this outbreak were natives.

CHOLERA AT KURSEONG.

Regarding the outbreak in Dr. Smith's family which has been ascribed to the eating of an overripe papya I think it will be best to give Mrs. Smith's story in her own words, which were as follows:—

family which has been ascribed to the eating of an overripe papya I think it will be best to give Mrs. Smith's story in her own words, which were as follows:—

"With regard to the papya to which I hear the cholers has been attributed, two were sent to us from Mr. H—"s garden on the lith or lith May. I think it was on the lith. They were not unripe as reported, but perfectly sound. I examined them myself and found no unsound spots on them. One was eaten at breakfast on the morning of the lith, and the other at dinner on Sunday might the 12th. I atc most of the fruit; the dhai" had none of it, and my little boy (18 months old) had none. Both the dhai and my boy were taken ill about the same time on Tuesday in the most and my boy were taken ill about the same time on Tuesday; he was away from home at the time at the Schim Tee Estates. The dhai came to me beween 8 and 9 a.m. on Tuesday, and said she had diarrhose, but that she had not been sick. I gave her some medicine, and immediately after went out for a ride with my husband. We were both feeling perfectly well. During the ride my husband lett me, and I returned home alone about 11 a.m. On the way I met the dhai going to her house, and she told me that since I went obth she and my boy had been sick, both about the same time. I gave her permission to stay away for the day. When I got home I found my boy looking very bad. My husband venturned home shortly after noon. At 1 p.m. we received a letter from my brother from Schim, saying that he was not well. I suggested to my husband that we had better have him brought up the kill, and we accordingly sent for him. At 3 p.m. my husband was taken ill with distributed the same time. I gave her with a schim provided the same time is a substituted to be before dinner. He had some soup and chicken in bed. I did not retire after dinner, but kept up for my brother whom I was expecting from Selim and suggested that I should go and see her. I went and shortly after the native bod. I did not retire after dinner, but kept up for m

3. It will be observed that Mrs. Smith's story points to some other medium than the papaya through which the poison of cholera was conveyed In these circumstances I deemed it expedient to make a full investigation into the matter. Accordingly in company with Dr. W. of Kurseong and the Rov. Mr. W——. I carefully inspected the house in which the late Dr. Smith lived, the adjoining village, and the suspected jhora between the village and Dr. Smith's house. The house itself and the premises appeared to us to be in a satisfactory condition from a sanitary point of view, and I would not for a moment hesitate to live in it myself. It is also clear that the late Dr. Smith, a man of envisible medical reputation and knowledge, did not consider the house unhealthy from his desire to renew his lease of it for five years. He objected, however, very strongly to the cooly lines some little distance from his house situated in the Singell Tea Estate, and I find that on the 5th November 1888, he wrote as follows to the Manager of that tea estate, who was also his laudlord:—"I am willing to take the bungalow on a lease of five years (as I have made some improvements in it, and on the condition that first the coolies be removed from this—I mean those (illegible) hetween the hungalow and the cent read as during the day months the house in all the cent read as during the day months. between the bungalow and the cart road, as during the dry months the house is almost uninhabitable from the stench, as the adjacent jhora is nothing but a flithy cesspool; even among the tea on the side of the road it is very filthy. among the tea on the side of the road it is very filthy.

"Before closing I must again point out the importance of having the cooly lines removed, for I should not be surprised if a serious epidemic broke out from the insanitary condition of the place. My dear W—, I am sure you will agree with me in this, and urge the necessary alterations." To this letter the Manager of the Singell Tea Company replied on behalf of the Company on the 6th November 1888 as follows:—"It is impossible this cold weather to make any alteration in the situation of the cooly lines you refer to, but next cold weather I shall remove as many as possible away. The jhora, I may mention, should be kept clean by the municipal sweepers.

"With reference to the 'insanitary condition' of the place, I consider that the municipality are to blame for this, as the Company pays them yearly a sufficient sum of money to enable the municipality to allow the sweepers to keep the place clean as well as the Kurseong bazar.'

4. After examining the house and premises, Mr. W—and I proceeded to the suspected jhora, which we examined and found in a filthy condition. We next inspected the village on the other side of the jhora and discovered after some difficulty, owing to the reticence of hill men to give information on such subjects, that there have been three cases of severe diarrhees

^{*} This woman although called dhai was really only an ayah.

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(which were possibly choleraic) in the village shortly before Dr. Smith's death. I saw two of the persons who had suffered. They said they had severe abdominal pains accompanied with severe diarrhoea, but no vomiting, and the mother of one of them confessed that she had washed her daughter's soiled clothes in the jhora. It is true the jhora is a running stream, but I am informed that in May the water in it was scanty and flowed slowly, only four slight showers of rain having fallen from the 1st to the 14th May, on which date the cholera broke out in Dr. Smith's family. It is thus possible if the three persons in question actually suffered from cholera, as seems probable, that some of their cholera germs were retained in the close vegetation on the banks of the jhora, and when it is remembered that the drainage from a large portion of the Kurseong bazar flows into this jhora; that the cholera hospital is situated in the midst of a thick jungle near the banks; of the jhora; and that this jungle, together with the banks of the jhora, is commonly used as a night-soil ground by the coolies of the Singell Tea Estate and also by persons passing to and from the hats held in the bazar, it will be readily understood how easily liable the jhora water is to be polluted. For these reasons it is much to be feared that the water from this highly contaminated jhora, which it is admitted was conveyed to the house and probably mixed with the hydrant water kept for drinking purposes, was one of the chief causes of the cholera in Dr. Smith's family. It is true that the sample of water drawn from the jhora and forwarded to the Chemical Examiner to Government for analysis has been pronounced by that officer to be of good quality, but it must be remembered that the sample of water was drawn several days after the outbreak of cholera in Dr. Smith's family, and after several heavy showers of rain had scoured out the filthy jhora, so that the result of the analysis does not prove that the water was pure at the time of the outbreak. It is said that Dr. Smith did not visit any cholera cases, nor was he in any locality in which cholera was present shortly before his death, but I understand that for some days previous he had been travelling about a good deal, and complained of exhaustion after each day's work, so that his constitution must have been debilitated at the time he was attacked, and it is therefore not surprising that he succumbed to the effects of cholera and the pneumonia with which he was afterwards attacked.

5. In the course of my enquiry into Dr. Smith's case, my attention was drawn to the fact that the Kurseong Municipality do not allow house connections with the main waterpipes. I cannot understand why they should object to this obviously sanitary precaution, unless it be on the grounds of insufficiency of water. But if this is so, steps should be taken without delay to increase the water-supply. If house connections were allowed, as they undoubtedly should be, the risk of drinking contaminated water would be reduced to a minimum. At present that risk is considerable. Native water-carriers do not sufficiently appreciate the benefit of pure water, and to save themselves what they consider unnecessary trouble, they in the majority of cases draw water for the use of their employers from the nearest source, whichever that may be—hydrant or jhora, regardless of the purity of the water in the

one case, and the probable impurity of it in the other.

CHOLERA ON THE DARJEELING-HIMALAYAN RAILWAY.

6. The second outbreak of cholera in the Darjeeling Hills, referred to in the opening paragraph of this report, occurred on the Darjeeling-Himalayan Railway at Tindaria, the Engineering and Traffic head-quarters of that Railway, and at the "12th mile," some distance below Tindaria, near the foot of the hills. Unfortunately the origin of the cases which occurred at the 12th mile is involved in such hopeless obscurity that, notwithstanding the valuable assistance I received from Mr. Bernard, the Railway Company's Engineer at Tindaria, I failed to trace any of the persons attacked or their relations, and the information received on the subject from other sources is so indofinite and contradictory, that it is useless to comment upon it. At Tindaria itself only one case of cholera occurred, and that was the case of a young European engine driver named Casey (aged 23), who was attacked on the 1st June, and died on the 2nd idem. The particulars of the case, which have been obtained from the most reliable and authentic sources, viz., from the railway records at Tindaria, a brother employé, and the persons who worked with Casey two days previous to his attack, are as follows:—

On the 31st May, Casey left Tindaria at 5-45 a.m., and daove an engine to Kurseong. He returned to Tindaria at 9-15 a.m., and left again at 9-55 a.m. for Darjeeling, where he arrived at 3 p m. He left Darjeeling at 5-10 p.m., and got back to Tindaria at 9-10 p.m. Casey thus worked for about fifteen and-a-half hours on the 31st May, and travelled over a distance of 87 miles. The ordinary run of an engine-driver on the Darjeeling-Himalayan Railway is 50 miles a day. Any excess over that amount is voluntary, and is considered as overtime, for which the driver gets overtime allowance. Casey, it appears, had recently been appointed an engine-driver, and was anxious to earn as much money as he possibly could in order to support in comfort a sister in Darjeeling. On the 1st June, Casey commenced work at 7-30 a m. He left Tindaria at that hour for the Terai and got to Sukna at 10-30 a.m. He left Sukna on the return journey at 11-5 a.m., and reached Kurseong at 4-5 p.m. At 5 p.m. he left Kurseong and returned to Tindaria, where he arrived at 6-40 p m., and worked no more. He thus did a little over 11 licurs' work on the 1st June, and travelled a distance of about 50 miles. Although this record is less than that of the previous day, it was, if anything, a harder day's work on account of the exceptional heat of the day, and the trying portion of the railway over which the early part of the day's work was performed. From careful enquiries made by Mr. Bernard and myself from the stokers who worked with Casey

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on the 1st June, it appears that on the return journey from Sukna they were all very much When they got to the overcome with the excessive heat—Casey more so than any of them. 12th mile, they stopped as usual to water the engine, and Casey drank a large quantity of water from an adjoining jhora or stream. It appears that the water of this jhora is of notoriously bad quality, and that just about that time there had been several cases of cholera in the locality. It is not certain whether Casey was aware of this, but the probability is that he was. At any rate the stokers were, and refrained from drinking the water of the jhora, although they too were very thirsty. It appears also that they warned Casey not to drink the water, but to wait a little while longer until they got to a purer stream. Casey, however, being very thirsty said he could not wait, and drank the water. The rest of the story had better be told in the words of driver Fitzgerald, an intimate friend of Casey's, in whose house the letter died at 4.6 n m. on the 2nd June in house the latter died at 4-6 p.m. on the 2nd June:-

- "On the 1st June I went up to Kurseong with Casey and returned with him that same day to Tindaria. He did not complain of being ill, and seemed all right. We arrived at Tindaria about 6-40 p.m., and Casey, after returning his engine to shed, walked to his bungalow, a short distance from the railway station. I accompanied him, and as we walked along, he complained of feeling fatigued. He had a wash and sat down immediately to his dinner. I sat and talked to him while he ate, and observed nothing unwholesome or unusual on the table. When he had finished his dinner, I left him and went to my own bungalow, which is next to his. After a wash I went into my verandah, from where I saw Casey vomiting in his. I asked him what was the matter, and he said he was feeling unwell; then he went inside and laid down. I also returned to my room and laid down. A few minutes later Casey strolled in and said—' Fitz, are you going to bed?' I said 'yes, ' and then he went back to his bungalow. I turned over and dropped of to sleep. About half an hour later a knock at my door awoke me. It was Casey. He called out ' Fitz, epen the door. I did so, and he said, ' I am feeling very ill; can I go to your bathroom (he had no bathroom furniture in his bungalow); help me in Fitz, for I am feeling very weak.' I helped him in. When he came out of the bathroom he insisted upon lying on the floor, although I offered him my bed. The cramps then came on, and shortly afterwards he collapsed. I was with him until the time of his death, which happened at six minutes past four o'clock in the afternoon of the next day. He was treated by the native medical officer attached to the Railway at Tindaria, but the treatment had no effect."
- 7. Such is the sad history of Casey's attack of, and subsequent death from, cholera. There can, I think, be no reasonable doubt that polluted water, and polluted water alone, was the medium through which the poison of cholera entered into his system, which being already debilitated by previous hard work and fatigue had not sufficient strength to battle with the disease. Not the slightest suspicion attached to his diet, which appears to have been wholesome. I carefully examined the cook, who declared that Casey ate nothing unusual during the last week of his life. I also examined the kitchen and cooking utensils, and discovered nothing suspicious about them. Tindaria is not an unhealthy locality. On the contrary it has the reputation of being, and in reality is, a particularly healthy place. Situated at an elevation of about 2,700 feet abovesea level it enjoys a genial climate, and is out of the endemic area of cholera.

CHOLERA IN THE TEA GARDENS SITUATED IN THE MAHANUDDY VALLEY.

8. The third outbreak of cholera in the Darjeeling hills, into which I enquired on the S. The third outbreak of cholera in the Darjeeling hills, into which I enquired on the 5th, 6th, and 7th of June, and again on the 18th, 19th, 20th, 21st and 22nd idem, occurred in some of the tea gardens situated in the Mahanuddy valley. There are 13 tea gardens in this valley, but only the four shown in the rough sketch on the opposite page were seriously attacked. There were isolated vases of cholera in some of the other gardens, of which it is not necessary in this report to take any particular notice. I had the greatest difficulty in arriving at the truth of the outbreak in the Mahanuddy valley, and had it not been for the very great assistance rendered me in the course of my enquiry by the managers of the several tea gardens I visited, specially by Mr. Court of the Sepoydoorah Tea Estate, and Mr. Nash of Simring, who were untiring in their efforts to procure me reliable information, I should not have been able to submit even an approximately accurate report on the subject. I should not have been able to submit even an approximately accurate report on the subject. The accounts given by the Nepaulese coolies and others on the gardens were very conflicting, and in many cases absolutely contradictory and absurd. I do not believe that this was due to any desire on their part to deliberately misrepresent facts, but simply to ignorance, the

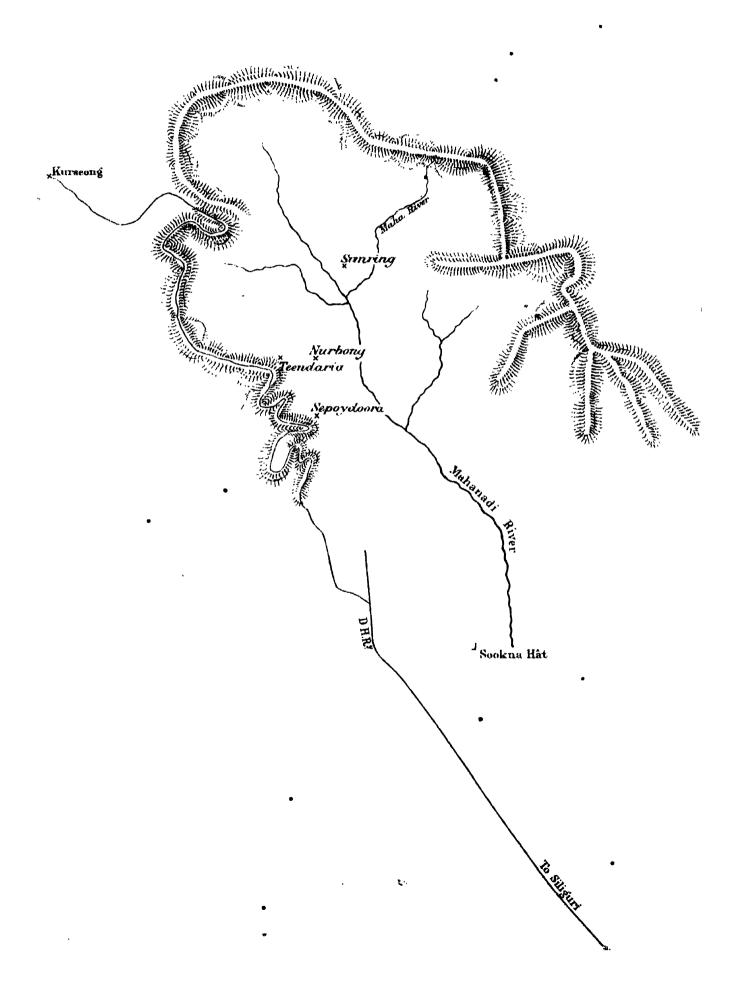
slovenly habit of arranging their ideas and the attractiveness of exaggeration.

9. The outbreak of cholera in the Mahanuddy valley originated in the Sepoydoorah tea estates, and spread from there to the other gardens shown in the above diagram. The origin of the disease in the Sepoydoorah Tea Estates is thus described in an interesting letter. I received from Mr. Court the manager of that reader are the subject to the sub letter I received from Mr. Court, the manager of that garden, on the subject before my

second visit to the Mahanuddy valley:-

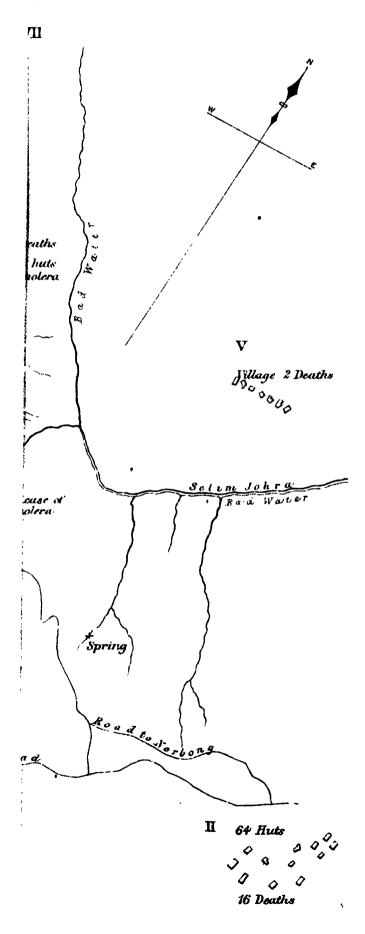
"The first outbreak I traced to a man who went into the plains to get buffaloes: he was taken ill in a basti, and his companion returned here and took three men with him to the busti, and the four men carried him up here. I treated him with Perry Davis' Painkiller, as I wanted to try its effects on diarrheas; the man recovered, but within four days six people who lived in the hut got ill, and one after another died; it spread to the two next huts, and three more children (boys and girls over seven years) got it and died; two women got ill but recovered. * * I had no more cases (except one woman who died after three hours' illness, but whose death I cannot put down to cholera) for three weeks. * * On 1st May cholera broke out on Nurbong, the next garden, and it may have been carried there from my garden. The first outbreak (in the Sepoydoorah tes garden) was in a busti of 64 huts. * * * Three weeks after cholera had ceased here, two of my coolies who had been fishing in the Mahanuddy below Nurbong, and who on their way back took some Nurbong coolies who were very ill with cholera to the stream and gave them water to drink, got ill with cholera and both died, their wives and children bolted and left them to their fate. These cases took place in a busti of seven huts on the opposite hill to the busti first attacked. * * One week letter (26th May) a plains carpenter got cholera at 8 p.m. on Sunday

Sketch showing the approximate position of the Tea Gardens in the Mahanadi Valley most seriously attacked with Cholera.



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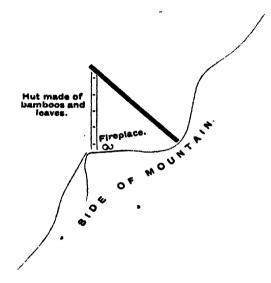


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night, and was dead by sunrise on Monday. I was away and he got no medicine. On the previous Saturday two carpenters had come from Simring and put up with him at the time cholers was very bed at Simring. On Monday, 27th May, a hill carpenter got ill in the morning, and was dead at 5 p.m. Four more men and women died the same day. In the next four days 20 more coolies died, all in the same busti * I have no doubt that the cholers once started was carried on by the agency of water."

10. Mr. Court has done his best to keep the drinking water in his garden good, and it appears that from the 1st of March in each year, when it begins to get scanty, he keeps a special chowkidar to look after it, but in spite of these precautions there is no doubt that the water is polluted in various ways. A sketch map of the Sepoydoorah Tea Estate is given on the opposite page out of the eight villages on the estate shown in the sketch five were attacked with cholera, and that the largest number of deaths occurred in village No. VI. All the coolies in this village obtained their supply of drinking water from the Selimihora shown in the map, the water of which is of notoriously bad quality, being polluted by the inhabitants of that village as well as by those of village No. VII. The cholera did not, however, originate in village No. VI; but, as stated in Mr. Court's letter, in village No. II, which consists of 64 huts. The drinking water of this village is obtained from springs which are said to be good, but it appears that it is allowed to stand for more than 24 hours, and sometimes for several days, in the huts before being used. Considering the number of people inhabiting each hut and their filthy habits, it is very probable that the water in many cases gets polluted before it is used. The Nepalese are a bright intelligent race, but of extremely filthy habits. It is a common practice with them to ease themselves in the immediate vicinity of their huts, and sometimes when they are ill, inside the huts! In these circumstances, it is hardly possible for the water kept in the huts for drinking purposes to remain pure.

11. It has already been said that the cholera spread from the Sepoydoorah Tea Estate



to the neighbouring gardens. On the Simring Tea Estate there was a very sharp outbreak of the disease which commenced on the 14th May in the persons of a tailor and his two children. The tailor, it appears, had been to the Sepoydoorah hat, where, cholera was present at the time on Sunday, the 12th May, and was taken ill on that evening. He recovered, but his children who were taken ill after him, died. There are five villages on the Simring Tea Estate, four of which are situated close together on the ridge of a hill, and obtain their supply of drinking water from the same source which is a polluted jhora, and the fifth is situated considerably higher up the hill and obtains its supply of water from a different source. Cholera raged in all of the four villages on the ridge, but did not attack the isolated village which obtained its water from a different and purer source. The panic in this garden was so great that the coolies fled into the jungles, isolated themselves as

much as possible, and lived a sort of primitive quarantine in groups of twos and threes in huts which they constructed for themselves somewhat after the design shown in the margin. Nothing would induce them to return to their work in the tea garden, until they were thoroughly satisfied that the abolem had second

thoroughly satisfied that the cholera had ceased.

12. The outbreak of cholera on the Tindaria and Nerbong Tea Estates were also spread from the Sepoydoorah garden, and, like the outbreak at Simring, was then carried on chiefly through the medium of polluted water. It is not necessary to give details of the cholera in these gardens, as they resemble the outbreaks in Sepoydoorah and Simring, which have been described above.

13. After a prolonged and most careful investigation into the matter, I am convinced that the recent outbreak of cholera in the Mahanuddy valley is traceable to polluted water. The disease, it is true, was in the first instance imported from the Terai, which is within the endemic area of cholera, in the persons of affected coolies, who invariably on the first symptoms of cholera flee to higher elevations in the hills, but there is no doubt that it was afterwards spread through the medium of water, which was defiled not only by the filthy habits of the coolies, but also, and chiefly, by the voided excreta of the persons suffering from the disease. It is of course impossible to prevent isolated cases of cholera, but I am convinced that serious outbreaks of the disease, such as have lately been experienced in the Mahanuddy valley, can be prevented by greater attention being paid to the water-supply, which it is absolutely necessary to protect from contamination, and the only way to do this is to convey the water from its source by means of pipes to each village in the estate. This idea is effectively and inexpensively carried out in the Gunti Tea Estate, which is situated at the head of the Mahanuddy Valley. Through the courtesy of the manager Mr. Lennox, I was allowed to inspect the water-supply arrangements of his garden, and Mr. King, his Assistant, was kind enough to conduct me over the works. At a distance of 1,240 feet from the factory

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on the opposite side of the hill, but at a considerably higher elevation, there is an excellent spring of water around which a stone reservior has been erected, vide sketch No. 1 on next page.

This reservoir not only collects the water, but prevents it from being polluted by men

and cattle. From the reservoir the water is carried along the side of the hill close to the

villages or bustis by means of hamboo pipes, vide sketch No. 2.

The manager of the Gunti Tea Estate proposes next year to substitute 1-inch iron pipes for the present bamboo ones, and to connect the reservoir with a large tank in some convenient position of the garden. When this is done, the water-supply arrangements in this tea garden, which are already very good, will be perfect, and there will be absolutely no fear of contamination. The primary cost of iron pipes is of course considerably more than of bamboo ones, but as the former are durable, they are cheaper in the end and certainly more satisfactory than bamboos which require to be renewed every now and again. I am informed that the water-supply of the Gunti tea garden used to be of extremely bad quality before the present arrangements were made, but that now it is very good. At the Clarenden Hotel at Kurseong the water is carried by means of iron pipes from the source of a spring which is situated some distance up the hill direct to the hotel, and the consequence is that the water there is always of the purest quality. At the Tukvar Tea Estate pariety of the property of the purest is an excellent iron pipe system of water-supply. Unfortunately I had not the time to visit this garden, as I was obliged to leave Darjeeling suddenly on account of urgent private affairs, but I have no doubt that the Tukvar system is well known to most of the tea-planters in the district, and I would strongly recommend the agents of the tea gardens in the Mahanuddy Valley and in such other places in the district where the water-supply is scanty and liable to pollution, to allow their managers to adopt some such arrangements as are in force in the Gunti Tea Estates, the Clarendon Hotel at Kurseong and the Tukvar Tea Estate, for preserving the water from contamination, and thus reducing to a minimum the chances of an outbreak of cholera on their gardens.

While enquiring into the outbreak of cholera in the Mahanuddy Valley, it struck me that a short report on the geological formation (with special reference to the water-supply of one or two of the tea gardens, where cholera had been severe, might be of interest and of some use. I accordingly asked Mr. P. M. Bose, Deputy Superintendent, Geological Survey, stationed at Darjeeling, to visit the Mahanuddy Valley, and with the permission of the head of his department to submit a short report on the subject. He has done so, and an extract from his report is attached for the information of those interested in the tea gardens situated in the

Mahanuddy Valley, particularly in the Sepoydoorah and Nurbong Tea Estates.

15. It only remains for me in conclusion to add my most cordial thanks to the several gentlemen who helped me in the course of my enquiry, particularly to the tea-planters, to whose hospitality and kindness in procuring for me details of all the information available in their gardens. I am much indebted. Before I undertook the enquiry, which is the subject of this report, I was under the impression that the planters as a rule were indifferent as to the health of their coolies, and took no interest whatever in sanitation, but I soon discovered that quite the contrary was the case. All the planters I had the pleasure of meeting take the greatest interest in the welfare of their labourers, and are keenly alive to the advantages of sanitation.

Extracts from a report on the Geologica. Formation (with special reference to the water-supply) of the Sepoydhura and Nurbong Tea Estates in the Mahanuddy Valley, Darjecling District.

At the request of Surgeon-Major W. H. Gregg, Sanitary Commissioner for Bengal, I visited two of the cholera-stricken toa estates, viz., Sepoydhura and Nurbong, on the 26th of June, with a view especially to examine their water-supply.

The water-supply on the tea estates is almost entirely under the control of the Managers. Good water and plenty of it will be ever welcome to the coolies, however little they may be

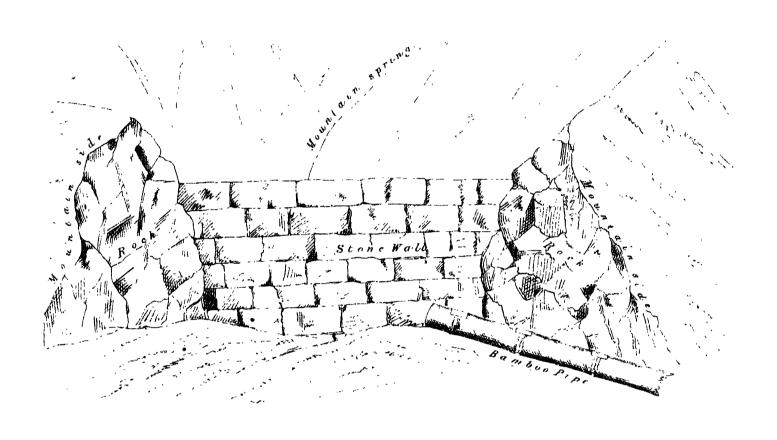
amenable to sanitary rules.

The dhuras or bustis of the Sepoydhura and Nurbong estates are situated along the crests of spurs of the Sub-Himalayan Range, elevated about 2,000 feet above the sea-level. The situation is well chosen, for it Situation of the tea estates. protects the coolies to a great extent from the malaria of the deep valleys on either side of The Sepoydhura spur, which runs in an east and west direction, is drained on the north side by a number of water-courses which feed a stream called the Selim jhora. On the south-side the estate is drained by feeders of the Panchanagi river. The Nurbong spur, which runs nearly north and south, is drained on the west side by tributaries of the Selim jhors, and on the east, by water-courses running into the Mahanadi.

Leaving out technicalities, the Sepoydhura spur (i.e., the spur on which the bungalow of the Manager and nearly all the coolie dhuras stand) as well as the Nurbong spur may be described to be formed of rather fine-grained, soft, microcous sandstones towards the top. These are of tertiary age. (Readers geologically inclined may consult "Memoirs of the Geological Surveys," volume XI, Part I.) Walking along the road from the bungalow of the Sepoydhura Manager to that of the Nurbong Manager, I met with nothing but these rocks. At Nurbong they contain small pebbles in some abundance, and are rather hard and massively bedded at places. Walking from the bungalow of the Nurbong Manager to the Pundi Hill, I met with some hard, sandy clay rocks, which appeared to be superposed on the standstones. They are, however, of

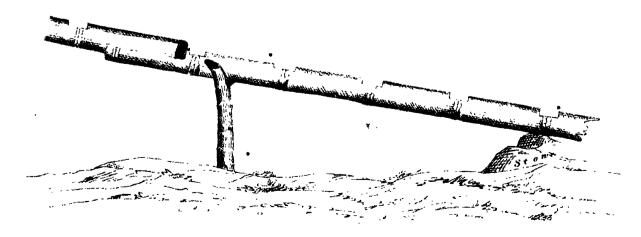
No. I.

Stone Reservoir erected around a mountain spring to collect the water and protect it from pollution by men and cattle.



No. II.

Bamboo Pipes through which water is conveyed from the reservoir to the villages in the Tea Garden.



insignificant extent, and the upper portion of the spurs-about 150 feet or so from the crest downwards—may be taken to be formed mainly of soft sandstones. The flanks of the spurs are much covered up, but they appeared to be chiefly formed of very hard, rather sandy, and micaceous clay rocks. All the beds roll about considerably, and no distinct dip (i.e., inclination of the beds) was observed anywhere except just in front of Chunabatti bungalow (former dak bungalow). Here the dip is north-western. The general dip as given on Mr. Mallet's geological map of the area may be taken to be northern with slight deflection to east and west. Sepoydhura Hat, just below Chunabatti, stands upon hard clay rocks. The short-cut

Present water supply.

road from the plains to Darjeeling passes through it. A large number of coolies live in this dhura, and a hat is held here every Sunday. The Selim jhora has one of its sources here; and the dhura in question obtains its water (which is very scant in the hot weather) almost entirely from this source. The other bustis of the Sepoydhura estate are situated on the Sepoydhura spur mentioned above. They depend for their water-supply on several water-courses which run into the Selim jhora, and which, I was told, become more or less dry in the hot weather. I was shown only one spring, on this estate, which yields a very scanty supply in the hot weather. There may be more spring, but I doubt if their supply is more copious. On the Nurbong estate I was shown three springs which yield a very scanty supply in summer. Two of these are situated on the eastern flank of the Nurbong spur, and the third on the western flank close to the factory. There is a fourth spring near the southern boundary of the Nurbong estate which would yield a never-failing supply. But it is far out of the way; and unless water could be pumped up from it and distributed to the bustis in pipes, it would be of no use. The Selian jhora at Nurbong is a good flowing stream throughout the year, but is too hard selicing to be utilised by them. The springs

Not satisfactory. which I saw are all surface springs, situated along the slopes The water of each spring is collected into a shallow pool not exceeding 3 feet of the spurs. in depth, and no precaution is taken to prevent its contamination by surface drainage. The pools were full at the time of my visit; but they must be dry, or very nearly so, in the hot weather. So altogether the water-supply of the tea estates I visited is not satisfactory; before the break-in of the rains, it is far from abundant and wholesome. Mr. Douglas, Manager of Nurbung, has been thinking of taking up water from the spring near the southern boundary of the estate mentioned above. But the scheme would entail heavy

expense; and before attempting it a simpler and far less expensive plan may be tried.

Before I make any suggestion as to how the present water-supply could be improved,

Permeability of the rocks.

it is necessary to premise some information for the general Permeability of the rocks. reader. Of the rocks mentioned above, the sandstones which constitute the upper portion of the Nurbong and Sepoydhura spurs being mostly soft, and to a great extent porous, allow the water to percolate through them with facility. They are the water-bearing rocks of the area. Amongst them, however, the disintegrated uppermost standstones being loose and crummy are far more permeable than the harder and more compact lower sandstones. The hard clay rocks, on the other hand, are, in comparison with the standstones, far less permeable. This fact could be easily ascertained by chipping off bits of the rocks in the rains; the standstone would be found wet through, and the clay rock dry inside. Briefly speaking, the standstone may be said to be pervious or permeable, and the clay rock impervious or impermeable. The rain which falls on the standstones partly runs off the surface and partly sinks down. The water which percolates down the soft porous upper standstones, finds a check in its downward course in harder and less permeable standstones or in the clay rocks; and if there be an opening it flows out: such openings are the springs of the Nurbong-Sepoydhura area. The standstones take in their stock of water almost entirely in the rains; and as this stock is not replenished to speak of during the rest of the year, it becomes well nigh exhausted in summer, and the spring supply proportionately impoverished.

The clay rocks, though impermeable relatively to the sandstones, being themselves

somewhat sandy, become through disintegration rather permeable towards the surface, though to a far less extent than standstones in a similar position. Water percolating down the disintegrated upper sandy clays is stopped by hard clays underneath, and sometimes comes out as springs. The springs of the Chunabatti area (including Sepoydhura proper, where the hat is held) are springs of this nature.

Most of the springs of the Nurbong-Sepoydhura area are in the sandstones; and below them there is some thickness of these rocks through which Suggestions for improving the water percolates downward. I would suggest that a well be sunk on the site of a spring until the clay-rock or very hard and compact sandstone is reached (see diagram attached). The depth will vary according to the circumstances of each case; but in no case will it probably exceed 20 feet. The well holding Suggestions for improving the not only the water of the existing spring, but also that percolating through the lower rocks, is expected to yield a more copious supply throughout the year. The water having been filtered through sandstones will be sufficiently wholesome; and in order to prevent its contamination by surface drainage, some suitable masonry work should be built at the top, leaving of course the spring open, and providing for one or two outlets for the water to flow out when the well is full. The expense of such an excavation will be trifling.

If a spring be situated just above a considerable thickness of impermeable clay rocks, it

will be of no use digging through them. In such a case a well may be sunk from some convenient site down to the level of the spring.

With regard to Sepoydhura proper (just below Chunabatta), a well through the disintegrated upper sandy clay rock down to harder and more impermeable rock underneath in some convenient site, will I think be found useful.

I have made these suggestions with special reference to the geological structure of the Sepoydhura and Nurbong tea estates. They would, however, be applicable, matatis mutandis, to other estates. I have asked the Manager of the Nurbong estate to sink one or two trial wells of the nature suggested above. If the plan succeeds, it may be tried more largely.

P. N. BOSE, B. Sc. (LOND.), F.*G. 8.,

DARJEELING. The 3rd July 1889. Deputy Superintendent, Geological Surrey.

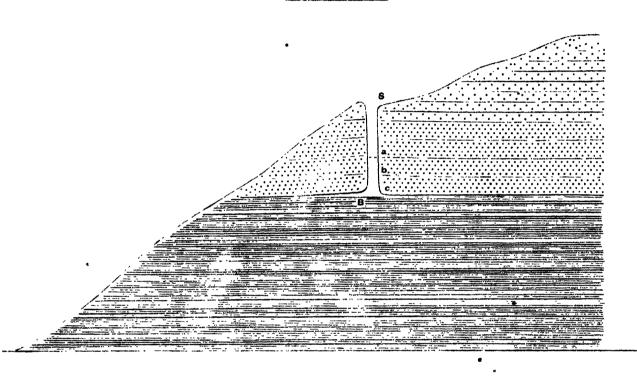


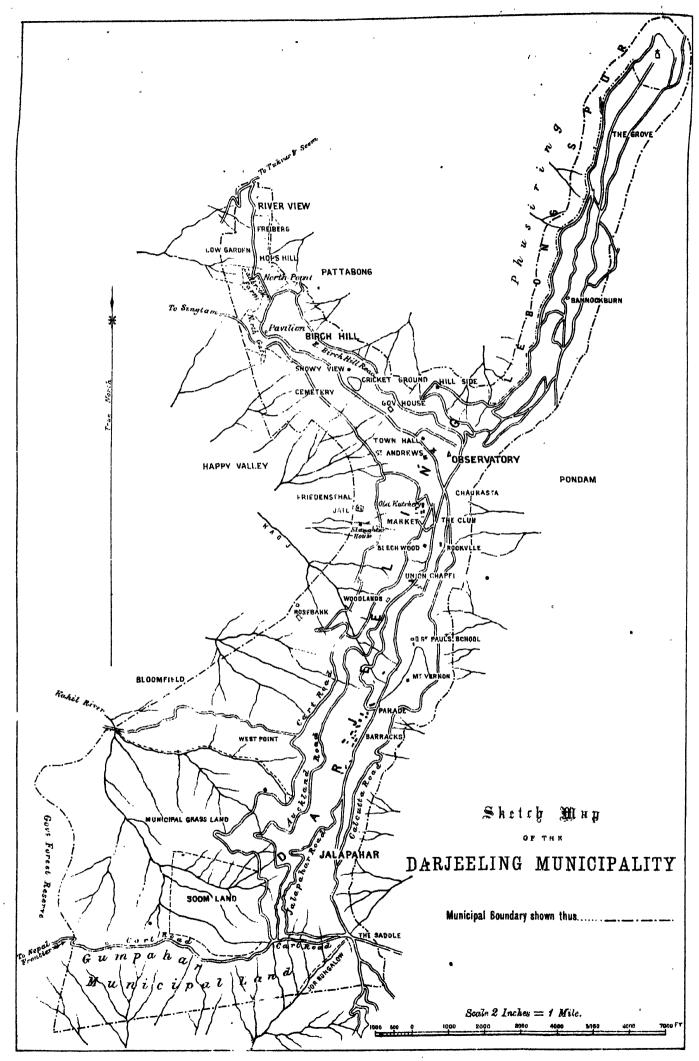
Diagram showing the situation of the suggested well (A B). It may be carried down to a, b, or c, the depth being determined by local circumstances. The dip of the beds is disregarded.

S. Situation of existing spring.

Upper more or less disintegrated sandstones.

wer, harder, closer grained sandsstone.

Clay rocks.



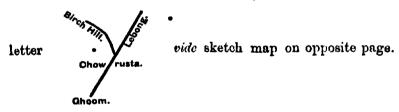
DARJEELING MUNICIPALITY.

The Municipality of Darjeeling having since its constitution in the year 1850 been managed by a succession of able and energetic Commissioners, who have had the advantage, in many instances, of valuable advice and suggestions from some of the eleverest and most experienced officers of Government, who have resided in their midst for a few months of every year, it would be a matter of surprise if its government and sanitary arrangements, which are also assisted by the natural formation of the land, a bracing climate and a fairly large revenue, were not all that could be desired. My expectations, however, were more than realised when I made an inspection of the town in June last. Darjeeling is, without exception, the cleanest, most healthy, and best managed Municipality I have yet inspected, and the Municipal Commissioners deserve great praise for the efficient manner in which they have performed the duties of their trust. The active interest taken by the official Chairman, Mr. A. W. Paul, Deputy Commissioner of Darjeeling, in the affairs of the Municipality is so well known to the public that it does not need any word of mine to place on record how much he has done to promote the welfare of the station. The Vice-Chairman also, Captain Power, takes a keen interest in all that concerns Darjeeling, and being himself a large landed proprietor in the district has the affairs of the Municipality at heart, and is a very efficient officer. The Municipal Commissioners, of whom there are 25, including the Chairman, seem to work together for the benefit of the town heartily and in unison, which is the secret of the success municipal administration has attained in Darjeeling.

The Municipality being in such excellent working order, it is difficult for a newly-appointed Sanitary Commissioner and a stranger to the place, such as I am, to suggest much in the way of improvement in my first inspection report. The few matters, however, which struck me as being capable of improvement I will deal with presently, after giving a brief description of the town for the benefit of those who are not well acquainted with it.

brief description of the town for the benefit of those who are not well acquainted with it.

The town and station of Darjeeling, which owes its origin, like Simla, Masuri and other hill stations, to the necessity that exists in India of providing places where the health of Europeans may be recruited by a more temperate climate. is situated near the northern boundary of the hills division of the district, in 20° 2′ 48″ north latitude and 88° 18′ 36″ east longitude. It occupies a ridge of the Himelaya mountains, stretching from south to north, which, at a point called the Chowrusta, about the centre of the station, gives off two spurs, one to the right and the other to the left, known respectively as Lebong and Birch Hill. The ridge on which the station is situated is very narrow at the top, along which most of the European houses are perched, while others occupy positions on its flanks. The Eden and Jubilee Sanitariums, the police lines, the bazar, and the Railway stations are built on the lower portion of the western slope of the ridge, and below these lie the jail, the Botanic Gardens and the native town, chiefly occupied by the poorer classes of natives, and consisting of huts built without method or regularity. In shape, Darjeeling resembles the capital



Almost all the houses in the town are built of bricks or stone, and roofed with corrugated or plain iron sheets, some of the buildings, such as the Shrubbery, the new Government offices, the Sanitarium, the Deputy Commissioner's house, and the villas belonging to His Highness the Maharajah of Cooch Behar and other residents, being exceedingly picturesque. The effect which the sight of the station produces upon a new comer as he gradually wends his way down the Himalayan Railway from Ghoom is charming, and he forgets the fatigue and tediousness of the journey by inhaling the cool breeze from the snowy range. The Municipality has an area of 5.50 square miles, and contains an ordinary population of about 7,018 souls according to the census of 1881; but being the great summer resort in Bengal from the heat of the plains, the population necessarily fluctuates considerably according to the season of the year. It is estimated that in the summer months the population is about 12,000. The income of the Municipality for the year 1888-89 amounted to Rs. 1,19,199, excluding an opening balance of Rs. 26,520. The expenditure amounted to Rs. 1,39,616. The year thus closed with a balance in hand of Rs. 6,103.

The drainage of Darjeeling is very good, and is gradually being further improved year by year. Nearly all the drains are made of stone, and all those in the bazar and native town, as well as the important drains in the European quarter of the town, have been soled with Mirzapore stone or half round glazed drain tiles, which makes it an easy matter to flush and keep them clean. The arrangements in connection with latrines, of which there are a good number, burial grounds, markets, roads, registration of births and deaths, vaccination, and dispensaries are most satisfactory. The only matters which struck me as being capable of improvement are the arrangements in connection with the disposal of the town refuse, the water-supply, and the crowding together of huts in the native portion of the town. The sites chosen for the cremation of the bodies of dead Hindus and for the burning of carcasses of animals are also objectionable, and should be removed if more suitable

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sites further from habitations can be found, as complaints were made to me by the headmaster of the Bhootea School and others living in and about that locality of the objectionable
smells they sometimes experience when the sites in question are being used. But as they
are so seldom brought into requisition, the nuisance complained of is not considerable.

DISPOSAL OF REFUSE.

The town refuse of Darjeeling consists mainly of street-sweepings, stable manure, and cook-room garbage. It is collected in carts and conveyed to a spot below the compound of Beechwood Cottage in the native part of the town, north-west of the market, and is thence carried down to the wooden "shoot" by a wire tramway 1,000 feet in length, which is thrown obliquely across the Chandmara Jhora. The shoot is situated beyond the left bank of the Chandmara Jhora at the head of a stream, which is dry except in the rains. This stream enters the jhora a long way down the hill near the junction of the stream with the Kag Jhora, a tributary of the Little Rungeet river. The shoot is 788 feet long, 5% feet wide, and 2 feet deep, and has an inclination of over 45°. Mehters are employed along the course of the shoot to keep its channel free from obstruction, and at the bottom of the shoot to remove the rubbish to some distance and throw it further down the khud. To prevent the accumulation of rubbish which has hitherto not been put to any useful purpose, a large portion of it is burnt during the dry season, but still a great accumulation takes place at the lower end of the shoot, which has given rise to a question concerning the pollution of the water of the Little Rungeet river by drainage from it. As the rubbish heap has not yet reached the bed of the Chaudmara and Kag Jhoras, it cannot contaminate the water of those streams or the Little Rungeet river in the dry season, but it is probable that during the rains a considerable quantity of the rubbish is carried bodily down into the Kag Jhora, together with a large quantity of the organic matter in the water which has percolated through the rubbish heap. But as much of the impurities in their course from the rubbish heap to the Little Rungeet river are removed by oxidation, subsidence, the action of plants, insects, crustacess, fishes and the like, I doubt whether the water of that river is polluted to any appreciable extent by the town refuse of Darjeeling. It is, however, distinctly objectionable to have a festering mass of organic matter so close to the residences of the people, and the question of devising some other method of disposing of the refuse should engage the early attention of the Municipal Commissioners. It has been suggested that the present wire tramway might be lengthened so as to earry the refuse further down the khud. But such an arrangement would not remove the nuisance: it would only carry it a little further off, and would possibly render the water of the adjoining streams more liable to pollution than they are at present. Another suggestion is to give the refuse to the neighbouring tea-planters for manure. This is an excellent idea, and if it could be carried out, would solve a very difficult problem in connection with the disposal of the rubbish. I am informed, however, that the refuse has already been offered to the planters, who do not consider it worth their while to incur the cost of removel. I cannot understand this, as there is no better manure than the matter which composes town refuse, and in Eugland and on the Continent agriculturists are always most anxious to get as much of it as they possibly can, and even to pay largely for it I would suggest that another effort be made to induce the neighbouring tea-planters to take the refuse. If it is again unsuccessful, the Municipality might consider the practicability of removing the refuse in specially constructed trucks by rail to a suitable site near thoom. Such a site could probably be found off the Nepal Frontier Cart Road, which branches off from the Ghoom station in a westerly directive to the could probably the continuous direction. tion. The cost of constructing a branch line from the Ghoom railway station to the selected site would not, I understand, be prohibitive. By disposing of the refuse in this way, it would be a nuisance to nobody, and would remove all fear of an outbreak of disease emanating from the present rubbish heap in the station. Another satisfactory way of disposing of refuse is by burning it in incinerators, as the Calcutta Municipality hope to do. The only question is how an incinerator would act in a moist climate like that of Darjeeling, where the average annual rainfall is not less than 133.09 inches. It appears from enquiries I have made on the subject, that although several attempts have been made in various parts of India to burn town refuse, the experiment has not yet been successful anywhere. I would, therefore, advice the Darjeeling Municipality not to try burning until the result of the experiments about to be tried in Calcutta is known. If they succeed in Calcutta, the trial of similar experiments might be made in Darjeeling, but the important difference of rainfall between Calcutta and Darjeeling must not be lost sight of in coming to a decision in the matter.

WATER-SUPPLY. .

The water-supply arrangements of Darjeeling have, I am informed, undergone great improvements within recent years. The water is obtained chiefly from natural springs in the Sinchal hill through a six-inch main pipe to the eastern foot of the Jallapahar hill near Jorebungalow, and thence through a four-inch pipe to the collecting reservoir near Rockville boarding-house. From this reservoir it is distributed to the town in pipes of various sizes as circumstances require. In the rains the water-supply is more than sufficient, but in the dry months I am informed that it is insufficient not only for drain flushing, but sometimes also for domestic purposes. The Municipal Commissioners might consider the possibility of increasing the supply of water at Sinchal in the dry season. It has been suggested that a second main pipe should be laid down, but I should think that there would be no necessity for such

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a large outlay of expenditure if the catchment area at Sinchal were enlarged so as to collect a greater quantity of water than it is capable of holding at present. The main pipe and the reservoir near Rockville would thus be constantly full, and there would always be a supply of water equal to the demand. In the course of my enquiry into the water-supply of Darjeeling, my attention was drawn to the prevalence of hill diarrhoea in the station during the rains, which is generally attributed by the residents to the water, and a system of filtration, similar to that in Calcutta, but on a smaller scale, was suggested. If this could be managed it would containly purify the water, but I am afreid the cost would be prohibitive managed, it would certainly purify the water, but I am afraid the cost would be prohibitive, especially as money is required for other improvements. I do not, however, share in the popular idea that it is altogether the water that causes hill diarrhoa. I rather think with Dr. Ballard of London that the cause resides frequently in the superficial layer of the earth, where it is intimately associated with the life processes of some micro-organism, and that the vital manifestations of such organism are dependent, among other things, perhaps principally, upon conditions of season and on the presence of dead organism matter in the soil reliable. upon conditions of season and on the presence of dead organic matter in the soil which during the dry months of the year, when there is a scarcity of water for flushing purposes, is sown, so to speak, and afterwards developed and air-borne. On the basis of this hypothesis, care should be taken to prevent, as far as possible, the fouling of the soil with matters out of which the material of diarrhose can be produced—a matter which involves such inhatters out of drains and sewers as shall carry away all liquid filth without allowing the passage of any such impurities into the surrounding soil, and which also necessitates a frequent removal of all other filth about dwellings which cannot be conveyed to drains and sewers—indeed a daily scavenging of premises, especially during the dry months of the year.

OVERCROWDING IN THE NATIVE TOWN.

It struck me that there was overcrowding in certain portions of the native town which might be remedied without much inconvenience or expense. Plenty of light and fresh air are of the first principles of sanitation, and are so essential to good health, that they should be secured at any cost. The Municipality should therefore jealously consider applications for the erection of new dwellings in already crowded localities, and take such steps as may be expedient with a view to provide more ventilation in and between the existing huts.

W. H. GREGG, M.B.

Sanitary Commissioner for Bengal.

Dated Calcutta, the 3rd September 1889.

REPORT ON THE TOWN OF NATTORE WITH SPECIAL REFERENCE TO THE FLUSHING OF THE MOATS IN THE TOWN.

No. $\frac{\mathbf{T}}{123}$, dated Darjeeling, the 11th October 1889.

From-Surgeon-Major W. H. Gregg, Sanitary Commissioner for Bengal, To-The Secretary to the Government of Bengal, Municipal Department.

I HAVE the honour to submit the following report regarding the flushing of the moats in the town of Nattore.

2. In compliance with the orders of Government, communicated to this office in Municipal Department endorsement No. $M_{\frac{N}{1}}$ 11, dated the 15th February last, I visited Nattore on the 17th, 18th, and 19th July, and carefully and minutely inspected the moats and the surrounding country in company with some of the local authorities. The result of my inspection has already been communicated demi-officially to Government, and I have

of my inspection has already been communicated demi-officially to Government, and I have now the honour to submit an official report on the subject.

3. Nattore, the ancient capital of the district of Rajshahye and at present the head-quarters of a sub-division, is situated about 30 miles east of Rampore Beauleah on the north bank of the Narad river in 24° 25′ 15″ north latitude and 89° 2′ 21″ east longitude. The town built on low marsh land reclaimed from the river, has always been noted for its insalubrity. It is centrally situated, however, and on that account was first selected as the administrative capital of the district. Nattore is a close and compact town clinging close around the Rajbari, or palace of the Nattore Rajas. This family first rose into power in the earlier half of the last century, and gradually obtained possession of almost the entire district. At the time of the Permanent Settlement of Lord Cornwallis, the celebrated Rapi Bhawani was the representative of the family, and her piety and indiscriminate

the entire district. At the time of the Permanent Settlement of Lord Cornwallis, the celebrated Rani Bhawani was the representative of the family, and her piety and indiscriminate charity induced her to make large alienations of property for religious and charitable purposes which with other causes have seriously diminished the estate. At present the Nattore estate holds only the third or fourth rank in Rajshahye in point of size, although the historical importance of the family gives it considerable prestige.

4. The present controversy regarding the flushing of the Nattore moats and the cleansing and purifying of the water of the Lal Dighi arose, I understand, out of the objection of the Raja to allow the moats to be flushed by a cut from the Narad river, which, in the opinion of the local authorities who have been consulted on the subject, is the source from which the moats should be periodically cleaned out and purified. I am sorry to disagree with such authorities as the Magistrate, the Inspector of Local Works, and the Engineer of the district; but after a most careful, minute and personal local investigation. Engineer of the district; but after a most careful, minute and personal local investigation. I feel convinced that the mosts should be flushed by a channel from the Godsi river north

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of the town, and not from the Narad river, which would be a mistake for the following reasons :-

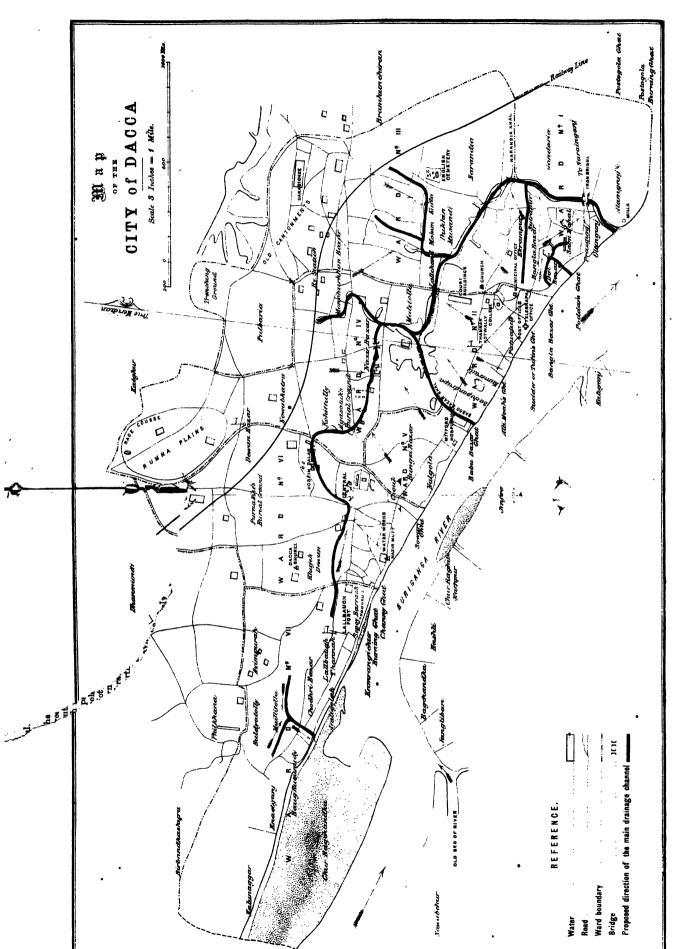
Nattore is surrounded and intersected by numerous bheels, of which the Chulan bheel, which lies some distance to the east of the town, is the largest. The slope of the country, and conequeently the natural flow of the drainage, is in a south-easterly direction, indicated and conequently the natural flow of the drainage, is in a south-easterly direction, indicated by a large red arrow in the map submitted to Government with my demi-official of the 22nd July. It will thus be observed that the drainage does not pass into the Ganges which skirts the southern portion of the district. but into the bheels to the east, particularly the Chulan bheel. The Ganges in its course along the district of Rajshahye gives off a large branch called the Burrul, which traverses the south-eastern portion of the district and communicates with the Chulan bheel. The Burrul gives off a branch, called the Godai, and communicates with the Chulan bheel The Burrul gives off a branch, called the Godai, which flows from west to east about four miles above or to the north of Nattore. This river is not shown in the district map of Rajshahyo published by the Survey Office in September 1883, but nevertheless it exists, and is a broad and navigable stream along which I saw a number of large country boats on their way back to the Ganges. The Narad, which is a stream about half the width of the Godai, flows immediately to the south of the town of Nattore. This stream was a branch of a tributary of the Burrul, called the Musakhan nadi, and is considerably silted up at its mouth. The consequence is that, except for 10 or 12 days in the month of September, when the water of the Mushakhan nadi is very high, the direction of the stream instead of being from west to east as reported to Government is actually from east to west, thus carrying with it not the water of the Ganges. is very high, the direction of the stream instead of being from west to east as reported to Government is actually from east to west, thus carrying with it not the water of the Ganges, but the water of the Chulan and other bheels which, though clear, has the reputation of being unwholesome. It will thus be seen that if the moats were flushed from the Narad river, they would not be flushed with good Ganges water as supposed, but with the water of the bheels which receive the drainage of the country and which must therefore be unwholesome. The Godai river, on the other hand, contains good potable Ganges water, and, in my opinion, is the river from which the moats should be flushed. The distance of this river from the town seems at that sight an objection to the proposal, but as a matter of fact there will be no difficulty or expense in this or in any other respect. Within recent years a channel apparently originally intended for irrigation purposes only, has been cut by the Raja to within a short distance of the moats. If this channel were connected with the moats, as it could easily be, all difficulty would be removed, and the inhabitants of Nattore would at once have an abundant supply of good Ganges water which could be used as often as necessary in flushing out the moats, a sluice-gate being constructed be used as often as necessary in flushing out the moats, a sluice-gate being constructed to keep in or let out the water from the channel as required. The Raja is quite agreeable to this arrangement, which has his entire approval, and before I left Nattore had actually set over 100 men to work at the proposed extension of the channel, which I unactually set over 100 men to work at the proposed extension of the channel, which I understand has long since been completed. The question of ingress having been solved, the next question is that of egress. There will be no difficulty about this, as the excess water from the moats will overflow into the drainage canal of the town which runs to the east of the Rajbari, and will then flow with the drainage of the town in an easterly direction to the bheels. The present drainage arrangements might, however, be improved as follows: The Narad to the east of the town formerly gave off a channel which flowed in a north-easterly direction. This channel has in recent years become very much silted up, and is now obliterated at its and I do not propose to remove this obliteration; but think that if the rest of the old channel were deepened and the accumulation of silt in some places removed it would carry off much of the drainage of Nattore which at present finds its places removed, it would carry off much of the drainage of Nattore which at present finds its way into the moats. 5. Lastly, with regard to the Lal Dighi, the Municipality have since my visit been taking steps to remove all the latrines from the immediate vicinity of the water and to raise the banks

of the Dighi. The Chairman of the Municipality has reported that almost all the most objectionable latrines have already been removed, and that the others will be removed as soon as possible, the delay being due to the opposition of the people living in the neighbourhood, which however is gradually giving way to the perseverance and persuasion of the Municipal Commissioners. There will, in my opinion, be no necessity to flush the Lal Dighi when the latrines on its banks are removed and the water guarded against pollution; for, taking into consideration the size of the tank and the depth of the water in it all research of the years the action of plants fish and other spinal life will eviciely need to all seasons of the year, the action of plants, fish and other animal life will quickly render the water pure and wholesome.

6. In conclusion I might mention that both Mr. Alexander, the Commissioner of the ishahye Division, and Dr. Russell, the Civil Surgeon of Rajshahye, with whom I have discussed at length and in detail the subject matter of this report, agree with me that, until the circumstances of the case, the most satisfactory mode of flushing the mosts in the town of Nattore is from the Godai river in the manner suggested in this letter.

DACUA MUNICIPALITY.

The city of Pacca, which is the principal town and civil station of the district of that name, was inspected by me on the 4th, 5th, 6th, and 7th September 1889. It was the first time I had seen the place, and I was very much interested in it. Leaving Calcutta by the 9-30 r m. train of the 3rd September, I arrived at Goalundo; the eastern terminus of the Eastern Bengal State Railway, early next morning, and proceeded at once by steamer to Naraingunge, a large and inductive the may be called the port of Dacca. The first thing that impressed and may journey to Dacca was the size and extent of the Ganges (Padda), down which one has to steam in order to get to that city. This river, as it is called, is an enormous expanse of water during the rainy season of the year, many miles in breadth, and in places looks morning an inlet of the sea than an ordinary river, and when, as often



748 No. 3678, San. - 31-10-88 - 76. 78, No. 367-18 San. Mengal. 1787-1881

happens, there is a strong breeze blowing in the opposite direction to the swift current, the happens, there is a strong breeze blowing in the opposite direction to the swift current, the waters are so boisterous that one almost imagines one is out at sea. From Naraingunge to Dacca is only a distance of about nine miles, which is performed by rail. Dacca is a very old and interesting city, and was at one time the seat of a Mahomedan Satrapy. It is situated on the north bank of a river called the Boorygunga, a branch of the Brahmahputra, which is about the same width as the river Hooghly opposite Calcutta. Within recent years the town has been extended westward, and the new houses and streets, which have been constructed according to 19th century ideas, stand out in striking contrast to those of the old town which was built during the middle ages. This contrast greatly adds to the interest of the old town which comprises more than three-fourths of the Municipality, and consists of streets and lanes mostly narrow and crooked. The houses which face the street are generally very narrow, and from one to four stories in height. In parts of the old city inhabited by very narrow, and from one to four stories in height. In parts of the old city inhabited by particular castes, such as the weavers' and shell-cutters' bazars, where building ground lets at a high rent, many of the four-storied houses have a frontage of only eight or ten feet, while the side walls, unperforated either by doors or windows, run back to a distance of twenty yards. The extremities of these buildings are roofed in: the middle part of the dwelling is left open and constitutes a small court. The city of Dacca lies in north latitude 23° 43′ 20″, left open and constitutes a small court. The city of Dacca lies in north latitude 23-43 20", and east longitude 90° 26' 10", and is bounded on the south by the river Boorygunga, on the east by a low alluvial plain which extends to the Lakhmia river, and on the north and north-west by a tract of jungle interspersed with old Mussalman cemeteries and deserted gardens, mosques and houses now in ruins. During the rains the lower levels of this portion of the environs are inundated, and the town is insulated by a labyrinth of creeks and morasses

that join the Boorygungs and Lakhmia rivers.

The Dacca Municipality was established in 1864 under the provisions of Act III (B C.) of 1864, and is now governed by Act III (B.C.) of 1884. It is divided into seven wards, and is composed of 21 Commissioners, including the Chairman. Fourteen of the Commissioners, and account and account of the Commissioners. and is composed of 21 Commissioners, including the Chairman. Fourteen of the Commissioners are elected by the rate-payers, and seven are nominated by Government. The area of the Municipality is five square miles, and the population, according to the census of 1881, is 80,161, of whom 42,732 are males and 37,379 females. Classified according to religion, the population is as follows:—475 Christians, 40,300 Hindus, 39,328 Mahomedans, 11 Budhists and 47 belonging to other denominations. The income of the Municipality for the year 1888-89 amounted to Rs. 1,53,462, excluding an opening balance of Rs. 2,603. The expenditure during the year was Rs. 1,55,107. The year thus closed with a balance in hand of Rs. 958

The sanitary arrangements of the town of Dacca have, I understand, received much attention in recent years from the Municipal Commissioners, who now seem to be taking a real interest in the affairs of the Municipality, and to be doing their best to make the town

real interest in the affairs of the Municipality, and to be doing their best to make the town as attractive and healthy as possible. There is still, however, a great deal for them to do, and I trust they will not flag in their endeavours to accomplish the desired end. The roads and communications throughout the city are for the most part well kept, and were in excellent condition when I inspected them. The arrangements in connection with markets, public latrines, registration of births and deaths, vaccination and cremation, are also satisfactory. and I have no special remarks to make under these heads, particularly as I understand that the Municipal Commissioners are conscious of the existing defects, and are gradually doing their best to remedy them. The most important and urgent requirements of the Municipality at present are :-

(1) An extension of the drinking water supply.

(2) A comprehensive drainage scheme.
(3) Improvements in the conservancy arrangements and additional trenching grounds

(4) Additional burial-grounds.

WATER-SUPPLY.

Through the princely munificence of Nawab Sir Abdool Gunny and his son Nawab Assanulla, the people of Dacca have received the blessings of a pure water-supply—the first necessity—though not the only one of sanitary progress. The present supply is 200,000 gallons a day, which, however, is unfortunately insufficient to meet the requirements of the town, the supply per head of population being only about 2½ gallons, against 40 gallons a head in Calcutta. The Municipal Commissioners are, however, taking active steps to raise a cheat the content to be able to extend the water-supply and it is bened that within a clear time. head in Calcutta. The Municipal Commissioners are, however, taking active steps to raise a loan in order to be able to extend the water-supply, and it is hoped that within a short time there will be an abundant supply of pure water in the most important parts of the town; but even after the proposed extension the water-supply will be only 3\frac{3}{3} gallons a day per head of population. I was conducted over the water-works by Babu Jogendra Chundra Aich, the Secretary and Engineer of the Corporation, who was also kind enough to explain to me the system of filtration, which is quite as elaborate as that followed in Calcutta, as the following comparison of the two systems will show:-

	CALCUTTA (FULTA).	·	DACCA.
	2 feet 6 inches of fine river sand.		12 feet of Dhalaseri river sand.
inches.	4 inches of Mugra sand.	inches	6 inches of Mugra sand.
feet 6	2 inches of pobbles.	3 feet 4	1 inch of broken stone.
-60	Two layers (6 inches) of bricks.		1 foot 3 inches of vitrified bricks.

DRAINAGE.

Next to an extension of the water-supply, the most urgent want of the Municipality is a comprehensive drainage system. The present drainage arrangements are very defective, and the sconer the question is taken up and dealt with, the better it will be for the health of the people of the town, the majority of whom are at present living in the concentrated essence of filth of all descriptions, as there is no proper drainage to carry it away. In all flat and lowlying towns an efficient drainage system is always a matter of difficulty; but when, as in Dacca, the land is only about 20 feet above mean sea-level, the difficulty is very great, and it is unfortunately increased by the difficulty of working a drainage scheme by means of sluice gates (as is done in other towns in Bengal situated on the banks of tidal rivers), because of the enormous volume of flood water which for two or three months of the year checks the action of tides in the Boorygunga river. Were it not for this difficulty, the drainage of Dacca could easily be worked by means of sluice gates in its numerous creeks and drains; but as it is, it will, I am afraid, be extremely difficult to do so. The Engineer of the Corporation and I, after fully discussing the subject, carefully went over the Municipality with the aid of a map on which the levels of the ground were marked, and also watched the flow of the water in the several trenches, ditches, and drains, by which means we were able to discover the natural flow of the drainage of the land. The result of our labours is shown by a thick black line in the accompanying map, which indicates the direction the main drainage channel of the city should take. It will be seen that the proposed main drain passes through many of the old moats or ghors as they are called, with which the city is studded. These moats or ghors, I am told, at one time far back in the middle ages when the city was built, ran one into the other and formed the main drainage channel of the city, and a protection to the houses which are built on either side of them, the houses themselves being built on the earth dug out of the ghors.

The following is a rough sketch of a portion of a ghor in ward No. II:-TO KHAL BRANCH OF DHOLL. HOUSES. HOUSES. GHOR. HOUSES. HOU/SES. W. HOUSES WARD No. 2. MOUSES! Houses are shown thus HOUSES. S.

Ixxxi [App. IV.

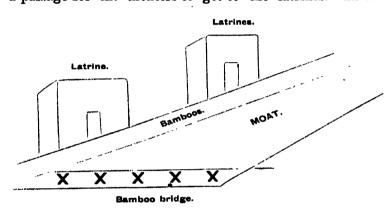
One cannot help admiring the design and forethought with which these ghors were originally made, and regret that the object was lost sight of in successive ages, during which they have been allowed to get silted up in parts, filled in and built over in others, and otherwise obstructed until now they are nothing better than stagnant pools of filthy house and cook-room refuse and solid and liquid excreta from the numerous latrines which crowd their banks, to most of which at present the municipal sweepers can get no access as they are completely shut out from the thoroughfares. Many of these old mosts will have to be opened out again, for, as stated above, in the scheme prepared by the Engineer and myself, marked out in the map attached to this report, they will form part of the main drainage channel of the city. When a proper main drainage channel has been constructed, it will be a comparatively easy matter to connect with it the smaller drains and ditches of the city.

In connection with the moats I would suggest that the banks of those of them on which

houses are not built should be planted over with fast-growing trees on both sides.

CONSERVANCY.

The conservancy arrangements of the city of Dacca require looking into at once, as at present they are either altogether neglected or very imperfectly performed. It has been stated in the preceding paragraph on drainage that the banks of the moats, which abound in Dacca, are covered with private latrines, to most of which the municipal sweepers cannot at present obtain access. The result is that both the solid and liquid contents of the latrines find their way into the moats, and there they remain for the greater part of the year. In some cases portions of the walls connecting the houses have been broken down, so as to make a passage for the mehters to get to the latrines. In other cases, particularly in the northeast portion of the town, where



east portion of the town, where the latrines overhang the moats, the mehters can only get access to the latrines by crossing the moats by means of rough bamboo bridges (vide sketch in the margin), and the temptation in such cases to throw the contents of the latrines into the moats is so strong that the sweepers can scarcely resist it. Such a state of things should not be allowed to exist in a large and wealthy municipality like that of Dacca, which is governed by an influential and intelligent body of Commissioners, and I trust that

attention will at once be given to the subject. Steps should be taken to provide easy access for the mehters to and from the private latrines, no portion of the night-soil should be allowed to find its way into the moats, and the whole of it should be conveyed to the trenching grounds and there buried. The public latrines, of which I had not time to inspect more than a few, are satisfactory, but in future when new ones are constructed, one of the plans given opposite page 29 of the Annual Report of the Sanitary Department for 1888 should be selected, as those plans are by far the most suitable for Indian mofussil towns.

As regards trenching grounds, there is at present only one in the Municipality, and that one is situated in Ward No. IV at the extreme north of the city. This is quite insufficient for the requirements of the town, and great delay and inconvenience are, I am told, in consequence experienced in disposing of the night-soil. There should be at least two more trenching grounds, one about the middle of Ward No. VI, and the other to the south-east of the English cemetery in Ward No. III.

BURIAL-GROUNDS.

A large new burial-ground has just been opened in Ward No. VI, as the old burial-ground in Ward No. IV, which is situated about the middle of the Municipality, has recently been closed under the orders of the Government of Bengal, as it was reported by the Civil Surgeon to be overcrowded, dangerous to the health of the town, and unfit for further use. The new ground, which I understand, is about 50 biggahs in extent, is well adapted for the purpose of a burial-ground. Care should be taken that it is properly drained, that fast-growing trees are planted in it, and that the graves are arranged in a methodical manner, i.e., in rows, and not anyhow as in the old ground. The only drawback to the new burial-ground is that it is a long distance from the eastern half of the Municipality, and for this reason I would recommend that an additional site be acquired and set apart for a burial ground in the eastern portion of Ward No. I, to meet the requirements of the inhabitants of the eastern half of the town. The expense would not be great, while the advantage and convenience would be considerable.

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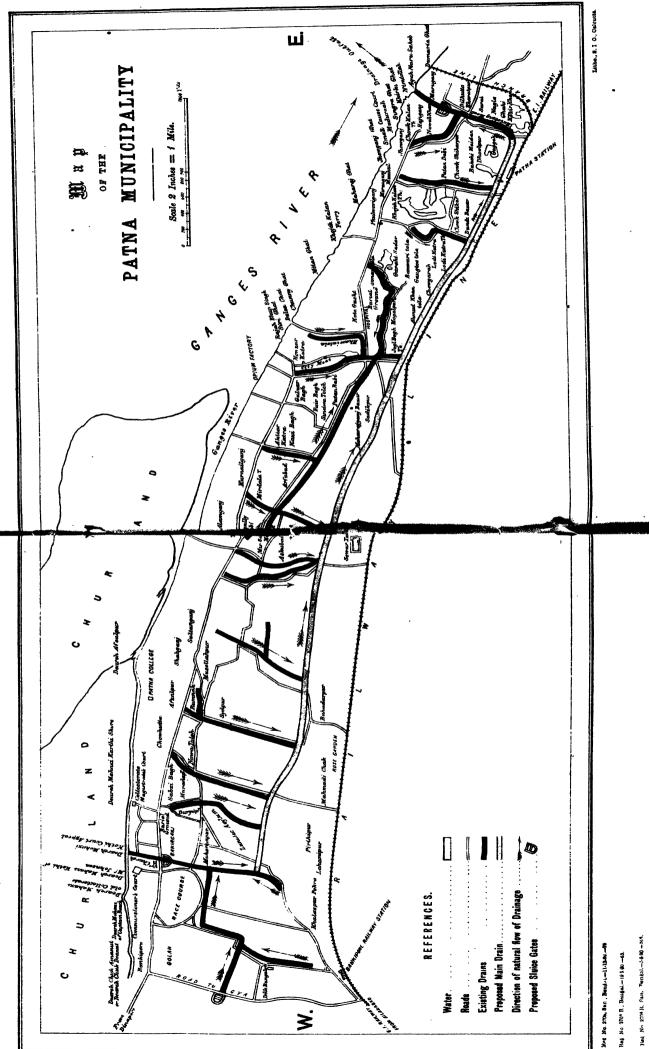
In conclusion, my acknowledgments are due to Mr. Worsley, the Commissioner of the Dacea Division, for many valuable hints and suggestions; to Babu Iswar Chunder Das, the Chairman, and Babu Gopi Mohan Basak, the Vice-Chairman of the Municipality, and to several of the Municipal Commissioners for the assistance they afforded me during the course of my inspection: also to Babu Jogendra Chundra Aich, the Secretary and Engineer of the Corporation, who accompanied me throughout my inspection, and helped me considerably with his opinion and advice on engineering matters connected with the drainage of the Municipality.

DARJEELING.

W. H. GREGG, M.B.,

The 17th October 1889.

Sanitary Commissioner for Bengal.



Net No. 270s, Sec , Bentel-11-12-88.--70

PATNA MUNICIPALITY.

THE Municipality of Patna, which is the largest and most populous municipality in Bengal excluding Calcutta, was inspected by me on the 24th, 25th, 26th, 27th, 28th, and 29th October 1889. It is situated on the right or south bank of the Ganges about 335 miles from Calcutta, in latitude 25° 37′ 15″ N., and longitude 85° 12′ 31″ E., and consists of the old and formers. Patro City and Bankings the civil attains and administrative head of the old and famous Patna City and Bankipore, the civil station and administrative head-quarters of the Patna district. The Municipality extends from east to west, and is about nine miles long by about a mile to a mile and a half broad. Many of the houses are nine miles long by about a mile to a mile and-a-half broad. Many of the houses are built of brick, but the majority are composed of mud with tiled roofs: very few are thatched. On the whole the dwellings of the people are smaller, not so well built and less comfortable than those of the inhabitants of Lower and Eastern Bengal. The cause of this is probably to be found in the fact that the people of Behar are poorer than their brethren in Lower and Eastern Bengal, which is also, I understand, the reason why the incidence of taxation in Patna is so low compared with other large municipalities. In Patna the rate of taxation is only 10 annas per head of population, against Re 1-4-1 a head in Dacca and Rs. 2-8-3 a head in Howrah. Taking into consideration the insanitary condition of the Patna Municipality, which I am sorry to say is very backward in this respect compared with other large Bengal towns, and the urgent need of money for necessary sanitary improvements, I think the present low rate of taxation might fairly be raised a little, for even after making allowances for the comparative poverty of the people, it must be admitted that 10 annas a head is a very low rate of taxation for such a large and populous Municipality as Patua, which is the centre of a considerable trade in castor-oil

populous Municipality as Patna, which is the centre of a considerable trade in castor-oil seed, wheat, rice, and other grains.

2. The Patna Municipality was established in 1864 under the provisions of Act III (B.C.) of 1864, and is now governed by Act III (B.C.) of 1884. It is divided into six wards, and is composed of 30 Commissioners, including the Chairman. Twenty of the Commissioners are elected by the rate-payers, and ten, including the Chairman, are nominated by Government. The area of the Municipality is 9.60 square miles, and the population, according to the census of 1881, is 160,237, of whom 78,762 are male, and 81,475 females. Classified according to religion, the population is as follows:—355 Christians, 118,958 Hindus, 40,892 Mahomedans, and 32 belonging to other denominations. The income of the Municipality for the year 1888 89 amounted to Rs. 1,29,415, excluding an opening balance of Rs. 12,173. The expenditure during the year was Rs. 1,27,514. The year thus closed with a balance in hand of Rs. 14,074.

thus closed with a balance in hand of Rs. 14,074.

3. Although it is stated above that the sanitary condition of Patna is backward compared with other large Municipalities, the Municipal Commissioners have not been inert or altogether unmindful of their duties. Within recent years the following improvements have been effected, which have greatly added to the benefit and appearance of the town. A large unhealthy swamp, which lay to the south-east of the Municipality, has been reclaimed; the marsh has been deepened into a handsome tank, and the surrounding ground considerably raised and converted into a park. A very good pucea drain has been made in ward No. 2, several roads and lanes have been constructed, repaired, or widened, some public iron latrines have been provided, and a number of other useful and needed important to the contract of th provements have been effected, and some are now being carried out. The Commissioners have also, I understand, considered the question of a water-supply scheme, but owing to the very large sum of money such a scheme would require, and the many other and more urgent needs of the town, the question has been abandoned, and I think wisely for the present.

The greatest and most urgent want of the Patna Municipality is a good drainage At present the drainage arrangements are shockingly bad : in fact there is no system. At present the drainage arrangements are shockingly bad: in fact there is no drainage system at all worthy of the name, and the result is that water collects and stagnates in several parts of the Municipality. This is at the bottom of the insanitary condition of the town. With a good drainage system the health and cleanliness of Patna would soon improve. Without it it will be impossible to improve the existing state of things, which, as stated in paragraph 1, is backward and insanitary. There is a good deal of latent, or if I may use the expression, crystallizing energy in the Municipality, and all that is required is a practical application of it, especially in the matter of drainage. A map of the Municipality is attached, showing, among other things, the present and proposed drainage channels. The thick black lines show the existing large drains, and the red line the proposed main drain which need not be nucea but kutcha, and con-

channels. The thick black lines show the existing large drains, and the red line the proposed main drain which need not be pucea but kutcha, and constructed as shown in the margin. The northern portion of the Municipality near the bank of the river being about 10 feet higher than the land adjoining the East Indian Railway line on the south, and the land to the north-west of the Municipality higher than that to the south-east, the natural flow of the drainage is in a south and easterly direction away from the river. The main drain should, therefore, be situated in the low land in the southern portion of the town, with an outfall to the east, where there happens to be an old most through which the water could find an easy outlet into the river. In recent years this most has become silted up in parts, but there would be no difficulty or much expense either in removing the silt and deepening the most to the level of the main drain. The existing drains indicated by thick black lines

in the map are mostly in the right direction, but they do not act freely on account of the levels in them being defective. This should be seen to and remedied as soon as possible. in the map are mostly in the right direction, but they do not act freely on account of the levels in them being defective. This should be seen to and remedied as soon as possible. When this is done, the proposed main drain constructed, and the most attended to as suggested above, there will be an uninterrupted flow of water throughout the Municipality with an outfall into the river below the town, and the drainage of Patna will then be as good as it is possible to make it for the small sum of money which the above improvements will cost, and which might be met from the subscriptions raised in 1876 for the reception of His Royal Highness the Prince of Wales, and which were not spent for that purpose. The direction of the main drain has been specially and carefully selected, not only with reference to the natural hollows and slope of the land, but also with regard to some old and partially obliterated drains, through which it will run, in order that the cost of constructing it may be reduced to a minimum.

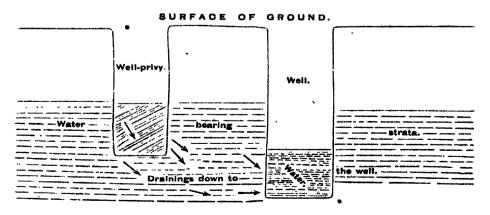
In close connection with the drainage of Patna are the inundations which occur every

In close connection with the drainage of Patna are the inundations which occur every year, and cause a great deal of sickness, sorrow, and suffering, to say nothing of the damage which they do to property. It appears that when the Ganges is in doord during the months of August and September, a large volume of water flows into the Municipality through a channel on the cost side of the characteristics. months of August and September, a large volume of water flows into the Municipality through a channel on the east side of the church, and also through culverts in the Gya road which is to the west of the town. As there is no outlet for this water, it saturates into the soil and causes the evils referred to above. It seems to me after a careful examination of the localities in question that the ingress of water from the river could be easily checked by the construction of sluice gates at the places where the water flows in, and also in the moat to the east of the town, which is to form the outfall of the proposed drainage system. With these three sluices, which are marked on the map attached to this report, the flood water of the Ganges could be easily and effectually kept in check, and the town thus saved from the annual inundations from which it at present suffers.

One word more in connection with drainage before I pass on to other subjects, and that is with regard to the two drains which open into the river east of the opium godown and west of or above a large and much frequented bathing ghât. These drains should be made to open into the river east of or below the bathing ghât, as at present they carry the dirty water of the locality past the ghât, which is a nuisance to bathers.

5. Almost if not quite as necessary as a good drainage system for the improvement

5. Almost if not quite as necessary as a good drainage system for the improvement of the sanitary condition of Patna is the closing of the well-privies, or sundases as they are called, with which the town abounds. I was shocked to learn that there are upwards of 20,000 of these abominable contrivances scattered over the Municipality. Apart from the sickening smell which they emit, nothing could be more deleterious to the health of the inhabitants of the town than to be living in the concentrated essence of such an atmosphere as surrounds these privies. I am aware that the use of well-privies is a time-honoured custom with the recent of the world of the surrounds. with the poorer classes of the people of this country, and that chiefly on that account it would be difficult and a hardship to at once abolish them altogether. I do not therefore suggest that such a drastic measure should be taken, but what I do recommend is that no new well-privy should be allowed to be dug, and that those that already exist should be gradually closed and filled up with clean earth. If the danger of, and objection to, well-privies were properly explained to the rate-payers, and a little moral pressure brought to bear upon them. I feel certain they would soon grasp the situation, and assist the Municipal Commissioners in putting an end to an evil which want by exaggerated, and which might any day be the cause of a terrible outbreak of sickness in the town. There can be little doubt that it is in a great measure owing to the proximity of well-privies to the water sources, which they must contaminate, that cholera and other diseases are so prevalent in Patna. As the tendency of all impurities in the soil, especially focal impurities, is to be gradually carried away with the subsoil water, which is always in a state of motion, in the direction of the nearest water-course, tank or well, it will easily be understood by a glance at the following illustrations how liable the water of domestic wells is to be contaminated by the fœcal matter in well-privies which are situated in the same compound as the wells :-

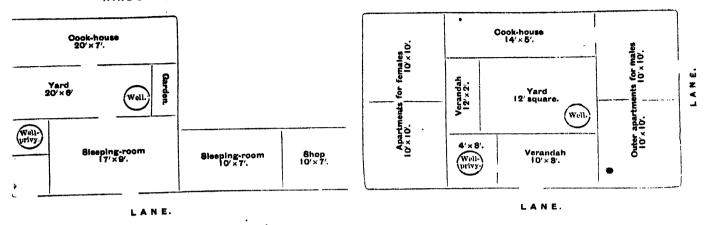


N.B.—The arrow ma-ks indicate the manner in which the impurities from the well-privies would find their way through the subsoil u.t. the well.

During the course of my investigations in Patna, I visited several of the houses of the poorer classes, and in each one of them the atmosphere was perceptibly polluted by the existence of well-privies which are actually within the very walls of the houses, and are never cleaned! The following typical illustrations of a Hindu and Mahomedan homestead in Patna show the situation of well-privies and their close proximity to the water wells:—

HINDU HOMESTEAD.

MAHOMEDAN HOMESTEAD.



It does not surely require any extraordinary intelligence to grasp the danger to health that such a state of things threatens. On the contrary, it is difficult to understand how such plague spots as well-privies are allowed to exist in civilized towns. Every endeavour short of coercion should be used by the Municipal Commissioners to induce the people to discontinue the practice of using well-privies, and to substitute in their stead latrines (protabe) accessible to the Municipal sweepers, so that they may be easily and regularly cleaned. The Municipality might also help the rate-payers in bringing about the desired change. In connection with this subject I wish to draw the attention of the Municipal Commissioners to the extensive and promiscuous open-air defocation and the consequent pollution of the soil that takes place in several parts of the Municipality, especially at Chornia Ghât, Dholi Ghât, and Payara Bhuthyear. This objectionable practice is no doubt due to the want of a sufficient number of properly constructed and cleanly kept latrines, of which I noticed only a few in the Municipality. More public latrines should be provided as soon as possible, and they should be constructed in accordance with one of the designs given opposite page 29 of the Annual Report of the Sanitary Department for the year 1888, care being taken to provide separate latrines for males and females. Separate apartments for the two sexes in the same latrine are not so desirable or acceptable to the people as distinct latrines altogether for the women, which should

not be approached by the road leading to the male latrine, but by a distinct road.

6. Before concluding, I would draw the attention of the Municipal Commissioners (1) to the unsatisfactory registration of vital statistics in Patna; 2) to the need for properly regulated slaughter-houses, of which there are none at present; and (3) to the necessity of re-organizing the present unsatisfactory system under which the work of the Municipality is carried on. With regard to the registration of vital statistics, so much has recently been written not only in my Annual Report for 1888, and the Resolution of the Government of Bengal upon it, but also in the special circular I addressed last month to all municipalities on the subject, that I need do no more than invite the serious attention of the Municipal Commissioners to those papers, and again ask them to give the matter their earnest consideration. As regards the third point, viz., the re-organization of system, I cannot do better than invite attention to the remarks made on the subject in the last Inspection Report of Patna by my predecessor, with whom I agree, and also by Dr. Nicholson, the late Civil Surgeon, who recently addressed the Municipality in the matter. The absence of centralization of authority is one of the greatest evils of the system under which the affairs of the Patna Municipality

are at present administered.
7. In conclusion, my acknowledgments are due to the Municipal Commissioners, especially to Moulvie Syud Fuzl Imam, Khan Bahadur, Vice-Chairman of the Municipality, for the valuable assistance they afforded me during the course of my enquiry; also to Mr. Parsick, the Engineer of the Municipality, who helped me considerably with his advice on engineering matters connected with drainage.

W. H. GREGG, M.B.,

Sanitary Commissioner for Bengal.

HOWRAH MUNICIPALITY.

I INSPECTED the Howrah Municipality on the 5th, 16th, 17th, 21st, 23rd, 28th and 29th November, and was accompanied at intervals by several of the Municipal Commissioners and

employés of the Municipality; also by some of the other residents of the town.

2. At the end of the last century, Howrah is described in the records of the Board of Revenue as a small village held by a Mr. Lovett, who petitioned the Board to be allowed to relinquish it. Since that time it has gradually rises and prospered with the growth of Calrelinquish it. Since that time it has gradually risen and prospered with the growth of Calcutta, and is now the most important town in Bengal next to Calcutta. It is the head-quarters of the magisterial district of Howrah, and is situated in latitude 22°35′16" north and longitude 88°23′12" east, on the west bank of the river Hooghly opposite Calcutta to which it is connected by a massive and unusually wide pontoon bridge, which was constructed across the river in the year 1873-74. The length of Howrah is about 8 miles, and the breadth about 2½ miles. The town is lighted with gas, and is the terminus of the East Indian Railway. It has several mills and manufactories of various sorts, and some important docks for the repair of ships. It has a Town Hall, a large maidan, and two good substantial bridges built over the railway connecting the northern portion of the town with the southern portion, where all the public offices, the jail and the hospital are situated. Howrah is also the resort of a large number of people whose business lies in Calcutta, and its interests and association generally are closely and intimately connected with that city. generally are closely and intimately connected with that city.

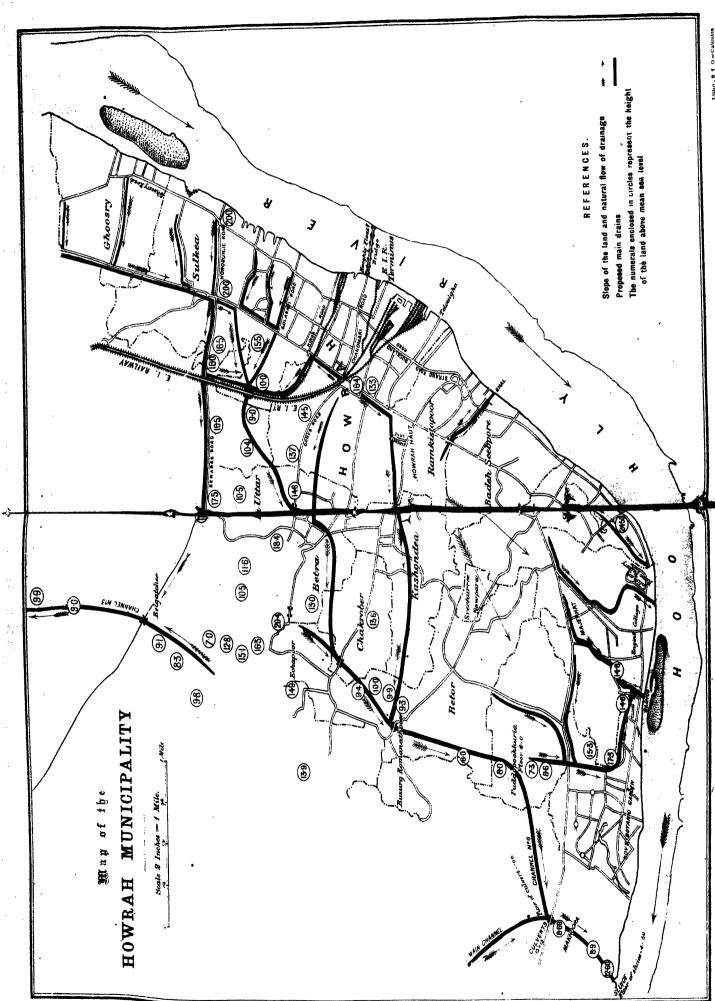
3. Howrah was originally constituted a municipality in 1862, but the present Municipality was constituted under Act III (B.C) of 1884. The town is divided into ten wards, and is composed of 30 Commissioners, including the Chairman. Twenty of the Commissioners are elected by the rate-payers, and ten, including the Chairman, are appointed by Government. The area of the Municipality is about eight square miles, and the population, according to the census of 1881, is 90,813, of whom 53,153 are males and 37,660 females. The excess of males over females is explained by the fact that the population includes a large number of artisans and labourers who come from various parts of Bengal to work in the industrial establishments in Howrah and do not bring their families with them. Classified according to religion, the population of Howrah is as follows:—1,894 Christians, 68,138 Hindus, 20,514 Mahomedans, and 267 belonging to other denominations. The income of the Municipality for the year 1888-89 amounted to Rs. 2,71,520, excluding an opening balance of Rs. 13,501. The expenditure during the year was Rs. 2,81,856. The year thus closed with a balance in hand

- of Rs. 3,165.
 4. The Municipality of Howrah being so closely connected with Calcutta, not only as far as situation is concerned, but also in the matter of business and interests generally, must be judged by the same high standard as one would judge the other Suburban Municipalities be judged by the same high standard as one would judge the other Suburban Municipalities of that city. Judged by such a standard, I am sorry to say the Municipality of Howrah falls far short of expectation. Indeed I am compelled to remark that even comparing it with other first class Municipalities remote from Calcutta, less wealthy and more difficult to manage, the comparison is not in favour of Howrah. Of all the large municipalities in Bengal which I have inspected, and I have inspected nearly all of them, Howrah is without exception the dirtiest, most backward, and badly-managed Municipality I have seen, and the Municipal Commissioners cannot be congratulated on the manner in which they have performed the duties of their trust. Glading defects and the most urgent and necessary improvements have been left untouched, while hundreds of rupees have been injudiciously spent on works cerecially drainage works constructed on a wrong principal. It is difficult provements have been left untouched, while hundreds of rupees have been injudiciously spent on works, especially drainage works constructed on a wrong principle. It is difficult to account for such a state of things, as the Municipal Commissioners, many of whom I have the pleasure of knowing personally, are an exceedingly intelligent body of men who seem to have the affairs of the Municipality at heart. I expect the fact of the matter is that most of the Commissioners are business men who have not the time to go about the town and see for themselves what has been, is being, and ought to be done, which is the only way a municipality can be efficiently governed. If this surmise is correct, then the sconer the municipality is reconstituted and composed of men who have sufficient leisure to devote to the affairs of the Municipality, the better it will be for the town.

 5. The greatest and most pressing wants of Howrah are—lst, a good drainage system; 2ndly, a filtered water-supply; and 3rdly, an improvement of bustees.

DRAINAGE.

6. The drainage of Howrah is admitted on all sides to be extremely defective, and all are agreed that a good drainage system is the most urgent requirement of the town, but on account of the monetary and physical difficulties which are said to exist, no such scheme has yet been attempted. I have therefore gone into the subject very thoroughly, and given it my most careful consideration, and the result of my labour has convinced me, as I trust it will convince the Municipal Commissioners, that it is quite practicable to introduce an efficient drainage system at a comparatively small cost. Like most of the towns and villages in Bengal, Howrah is situated on comparatively high land on the banks of the river, the slope of the land and the natural flow of the drainage being away from the river. In Howesh the land is leaved and the natural flow of the drainage being away from the river. In Howrah the land is lower in the west of the Municipality than in the east, and in the south than in the north, consequently the natural flow of the drainage is in a south-west direction with a natural outfall in the south-west corner of the Municipality as shown in the accompanying map which I have



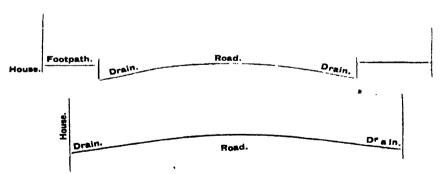
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prepared with great care and after much trouble. I have myself walked over the whole of the Municipality both during and after the late heavy rains, and have carefully watched the flow of the water which is in the direction of the arrow marks shown in the map. The correctness of this statement is borne out by the levels subsequently supplied to me by Mr. Thompson, the Executive Engineer in charge of the Northern Drainage and Embankment Division. The levels are shown in numerals in the map. At present the drainage of Howrah where it exists at all, for in the greater portion of the Municipality there is no drainage whatever, is so constructed that much of it finds its way into the river Hooghly, and thus pollutes to a considerable extent the water in the vicinity of the shipping. Great efforts are now being made to keep the water of the Hooghly in the northern portion of the Port as pure as possible and it is therefore, to say the least of it, not fair to the Port Authorities to have their efforts, in this direction frustrated by the discharge of the drainage of Howrah into the Port, especially as there is really no necessity for it, the natural flow of the drainage being inland, in the opposite direction to the river. I am aware that a large sum of money has been spent in draining portions of the town, especially in the vicinity of the East Indian Railway line, into the river, and that all this money will have been wasted if the drainage is now divorted in another But I am afraid there is no help for it, and that the sacrifice must now be made in the interests of the Port. It is very unfortunate that this was not taken into consideration when the scheme was devised. In fact I cannot understand how such an obviously wrong project came to be carried out. The direction in which it is now proposed to drain the town of Howrah is shown by thick black lines in the accompanying map. It will be seen that the proposed main drains follow the natural slope of the country, that they are not at variance with the levels of the land, and that they find outlets into the river at points below the usual moorings of vessels, the two principal drainage channels finding a natural and easy outlet through the Puddopooker bheel, and the Public Works sluice west of the Government Botanic Garden considerably below the shipping. When the proposed main drains are constructed, it will be an easy and comparatively inexpensive matter to connect the small drains of the town with them. But main drains should be the Municipality's first consideration. A portion of the them. But main drains should be the Municipality's first consideration. A portion of the proposed main drains is already in existence, so that the scheme suggested will not be entirely a new one, and I understand it can be carried out at a comparatively small cost. Something will also have to be paid to the Public Works Dopartment for the use of their sluice gate either in a lump-sum or in the shape of an annual rent. Before leaving the subject of drainage, I wish to say a few words with regard to the roadside drains of Howrah, which are about the most objectionable drains of the kind I have yet seen. Many of them are nothing better than elongated cess pools of cookroom refuse, shop sweepings and other objectionable matter in which worms are bred, and from which the most sickening and overpowering smells emanate. The drains are much too deep to be effectually cleaned. Hence the result described above. Most roadside drains in towns should be shallow and shaped thus :-

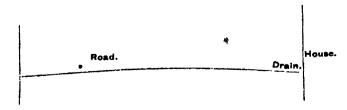


Such drains are the least expensive to construct, and the easiest to keep clean. Instead of being constructed on both sides of every road as at present, they should in future be made as follows:—

A drain on each side of every road from 20 to 40 feet broad (with or without footpaths) thus:—



A drain on one side only of every road or lane less than 20 feet broad thus:-



WATER-SUPPLY.

The need of a filtered water-supply for Howrah is a question about which there is no doubt whatever, the Municipal Commissioners and the people being all agreed as to the necessity for such a scheme; but owing to the difficulty of ways and means, the question has not yet assumed a practical form and is still under consideration. It has, however, at has not yet assumed a practical form and is still under consideration. It has, however, at last been decided to raise a loan of ten lakhs for the purpose, and now the only question is as to the most desirable source from which to obtain the water. There are four schemes under consideration. The first is to pump up the water, in the same way as the Calcutta Municipality do, from a place called Richra some distance south of Fulta, the source of the Calcutta water-supply. The second scheme is to obtain and carry the water from the Sursuttee Nadi, which is a branch of the river Damuda, about seven miles west of the Municipality. The third scheme is to pump up the water from a place called Ischapur on the banks of the Hooghly north of Goosey, a distance of about three miles from the Calcutta water-works system, the connection being made with a main pipe along the Strand Hooghly pontoon bridge, and the fourth and last scheme is to obtain the water from the Calcutta water-works system, the connection being made with a main pipe along the Strand Road at a point close to the pontoon bridge. The first scheme, which is undoubtedly the best, is impracticable for want of means, the cost being estimated at about 20 lakhs, which is double the amount the Municipality are prepared to raise. The second scheme is undesirable on account of the quality of the water in the Sursuttee being inferior to that of the Hooghly, and the certainty that the demand hereafter from that source will be unequal to the supply. The third scheme is objectionable, because the water at Isohapur is not so pure as it is further up the river, and is even brackish at times. The fourth scheme seems to be the most desirable one, and I understand from Mr. Kimber, the Engineer of the Calcutta Corporation, that it is quite practicable, and will not cost more than nine lakhs of rupees. Of course the consent of the Calcutta Corporation will have to be obtained before such a scheme is carried out or even discussed, but I believe that there will be no difficulty on this point. I have taken the trouble to go into this scheme very carefully with Mr. Kimber, and am convinced that it is the most desirable and practical. The following is an extract from Mr. Kimber's official communication to me on the subject: extract from Mr. Kimber's official communication to me on the subject:-

"The supply required, as I understand, is 10 gallons per head per day of filtered water for a popula-

Our present works with some extensions could bring down the extra quantity required for Howrsh from our head supply station at Pulta to the first covered reservoir at Tallah. So far the supply comes down equally during each day of 24 hours. I estimate that the contribution from Howrsh on this account would be a capital sum of about Rs 2,93,645. Of course the amount would ultimately have to be determined by the City Commissioners, but this is the amount I would recommend to them for their favourable consideration.

At and from Tallah arrangements must be made specially for Howrab, so that the 700,000 gallons would be delivered and distributed within 12 hours of daylight. The special plant and block so required would comprise two pumping engines (one for spare) with boilers, and the buildings to contain them, and a main to force the supply (in the first instance) down to the latitude of the Hooghly floating bridge. The engines would be about 90 effective IP each, and the main would be 15 inches diameter. I roughly

The engines would be about 90 effective H each, and the main would be 15 inches diameter. I roughly estimate this plant and block at Rs. 2,05,000.

For a total sum therefore of Rs. 4,98,645 the supply could be delivered at the point named within 12 hours. As the rate of consumption at certain hours would be double the average rate of supply, the machinery is calculated to meet this requirement, which would amount to 1.66 gallons per hour per head of population, all taking their capply simultaneously. This is scarcely half the average rate of Calcutta. If a greater rate of supply is required, of course the estimate from Tallah downwards must be increased. be increased

As to crossing the Hooghly, I see no considerable difficulty in taking such a moderate sized main across

As to crossing the Hooghly, I see no considerable difficulty in taking such a moderate sized main across by the floating bridge.

The City Commissioners have on more than one occasion formally allowed me to design and carry such water-works for outside authorities, viz., the Barrackpore water-works on account of the Government of India, and quite recently, the branch works for the whole of the eastern suburbs of Calcutta amalgamated with the city under the new Municipal Act, and I have also been allowed to accept extra remuneration for these works. With the consent of the City Commissioners, I shall therefore be very happy to devise a complete scheme for Howrah and supervise its execution if called upon to do so on the usual fee of 5 per cent on actual cost, and I would in such case, as I did with the amalgamated area and with the consent of the City Commissioners, associate with myself Mr. R. A. Oldham, M. Inst. C. E., whom I expect to arrive very shortly in Calcutta. The scheme I would devise would be a complete one including the distribution in Howrah, and I think might well be done within the limit of nine lakes of runces.

rupees.

As to the time within which the project might be carried out, I think it might be done within eighteen months, if the whole matter after sanction to the estimates were placed unreservedly in my hands, as was the case in the two instances above mentioned. The funds in covering amounts being redged as required in the Calcutta Municipal Treasury, and cheques drawn upon it by the Vicetchairman."

It will thus be seen that the estimated cost of the proposed filtered water-supply scheme for Howrah is one lakh less than the amount the Municipality is prepared to raise. A portion of this balance I propose should be utilized in carrying out the proposed drainage scheme.

OVERCROWDING OF BUSTRES.

8. The greater portion of the Howrah Municipality consists of rural villages, and some of the bustess situated in the town itself are fearfully overcrowded and in a dangerously insanitary condition. The following is a rough sketch of one of the worst bustess in the Municipality situated in the vicinity of Dores Road in the angle formed by the East Indian Railway line on the north and the Grand Trunk Road on the east :-

ri M z œ ۵ HOU 4 0 MAHOMMEDAN BURIAL GROUND. [] [] HOUSE H O U 8 E. TICCA PARAH BUSTER. S.

Dores Road is thickly fringed on both sides by numerous shops; from which it is separated by deep drains, the levels of which are so defective that the semi-fluid they contain (cookroom refuse, shop sweeping and other impurities) cannot easily pass off but remains in the drains seething and fermenting until it is ultimately partially absorbed into the ground and partially evaporated into the surrounding air to the great detriment of the health of the people living in the locality. I have never seen anything so disgustingly filthy in the whole course of my experience as the condition of these drains and the interior of the bustee bordering on Dores Road. I had actually to wade through filth anklo deep to got into the heart of this bustee, and when I got there I found myself in the midst of an atmosphere which nearly overpowered me. There are some kutcha latrines in this bustee which it was quite certain had not been cleaned for days, for I noticed that the pans of night-soil were over-flowing and mingling with the mud of the water saturated lanes and passages on the sides of the latrines. The above is by no means an overdawn picture, but a faithful description of what I actually saw and experienced when I visited this bustee. Such a state of things does not reflect credit on the Municipality, and the sconer the drainage and cleanliness generally of the locality in question is attended to, the better it will be for the health of the people inhabiting it.

BURIAL-GROUNDS AND BURNING GHATS.

9. The European cemetery, which is under the care and supervision of the Reverend A. N. Rolfe, is kept in excellent condition, and reflects credit on that gentleman's manageement. Close to this cemetery a large plot of land, about 25 bighas in extent, has recently been acquired for a Mahomedan burial-ground. It is desirable that the care of this ground should be vested in a Sub-Committee consisting of the Chairman of the Municipality, the Civil Surgeon, and one or two Mahomedan Municipal Commissioners.

There are three burning ghats in Howrah, and all of them, I am glad to say, are kept

in a satisfactory condition.

TRENCHING GROUNDS AND PUBLIC LATRINES.

10. The night-soil of Howrah is at present buried in seven trenching grounds situated in various parts of the Municipality; but as these grounds are nearly full, a very large plot of land, about 160 bighas in extent, has been recently acquired at a place called Bamungachia north of the Municipality, in which it is proposed to trench the night-soil of the town in future. As the new locality is too far for carts to travel to and fro daily, a steam tramfuture. As the new locality is too far for earts to travel to and fro daily, a steam tramway has been constructed for the purpose at a cost of Rs. 75,000, and will shortly be brought into use. The Commissioners should see that the night-soil is properly trenched in the new ground in the manner suggested in this office Circular No. 148, dated 16th November 1888, and that the ground is afterwards planted over. Nine new public latrines have lately been erected, but I am afraid they are not sufficiently ventilated as there is no space between the roof and the wall. This defect might easily be remedied by raising the roof slightly. Another mistake has been the construction of male and female latrines in the same place. The people are very much averse to the latrines for the two sexes being together. They should therefore be quite distinct and as far apart as will be convenient for cleaning purposes, and they should also be approached by separate paths.

and they should also be approached by separate paths.

In conclusion, my acknowledgments are due to the Municipal Commissioners, especially to Mr. Currie, the Chairman; Babu Guru Charan Rai Chaudri, the Vice-Chairman; Mr. Mitchell, the Secretary; and Mr. Henwood, the Conservancy Inspector, for the valuable assistance they afforded me during the course of my enquiry. Also to Mr. Donnithorne, the late Secretary of the Municipality, who helped considerably with his advice and knowledge of Howersh.

of Howrah.

W. H. GREGG, M.B.,

The 19th December 1889.

Sanitary Commissioner, for Bengal.

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[App. IV.

MEMORANDUM ON THE DRAINAGE, WATER-SUPPLY AND CONSER-VANCY ARRANGEMENTS OF THE MUNICIPALITIES OF NYHATTY. SOUTH BARRACKPORE, BARANAGORE. NORTH BARRACKPORE, COSSIPORE-CHITPORE, MANICKTOLLAH, SOUTH DUM-DUM, NORTH DUM-DUM, AND BARASET.

In the circular issued from this office on the 21st October last to all municipalities in the districts of the 24-Pergunnahs, Hooghly, and Howrah, it was stated that, with the view of promoting sanitary reforms in Bengal by helping and encouraging the practical application of sanitary principles to towns and villages, the Government of India had approved the formation of a Sanitary Board whose chief duty it would be to assist and guide municipalities on important material connected with sanitation; and it was added that one of the first duties of the Board would be to focus its attention on drainage and water-supply—the two measures best calculated to render Bengal towns more healthy and attractive than they are at present. With the above objects in view, and pending the formal constitution of the Sanitary Board, I commenced a thorough and systematic inspection of the municipalities of Nyhatty, North Barrackpore, South Barrackpore, Baranagore, Cossipore-Chitpore, Manicktollah, South Dum-Dum, North Dum-Dum, and Baraset, situated in the district of the 24-Pergunnahs, on the 3rd November, and continued it off and on for 20 days altogether. As no attempt has hitherto been made to inspect municipalities in groups, I had no precedent to guide me and had to strike out a new line for payally, which made the inspection all the to guide me, and had to strike out a new line for myself, which made the inspection all the more difficult. I was, however, helped to a considerable extent by the Municipal Commissioners of the several municipalities, who, I am glad to state, co-operated heartily with me by accompanying me in some instances and giving me the benefit of their local experience and professional advice in others. Notwithstanding this help, the enquiry was still an extremely difficult one owing to the large area of the ground to be inspected, and the difficulty, in the absence, in most cases, of maps, surveys and levels, of obtaining correct information information.

DRAINAGE.

The map accompanying this memorandum, which has been prepared with great care, gives a correct idea of the situation of the municipalities under consideration, which, it will be observed, lie along the east or left bank of the river Hooghly, with the exception of the municipalities of Manicktollah and Baraset which lie inland. The yellow lives in the map indicate the boundaries of the municipalities, and the thick black lines the general direction of the proposed main derivate channels which may have to be slightly madical in place. of the proposed main drainage channels, which may have to be slightly modified in places when the scheme comes to be carried out. The first thing for the Municipal Commissioners to do is to obtain levels along the proposed main drains and to reduce them all to one common standard, viz., mean sea level. The distance from north to south of the land occupied by these municipalities, except Baraset, is about 30 miles, and the breath varies from 1 to 2 miles. The whole of this tract of country is exceedingly flat with a slope of only 23 feet, from north to south and of about 10 feet from the river bank on the west to the lowlying paddy fields on the east; consequently the natural flow of the drainage is in two directions, viz., from north to south and also from west to east. viz., from north to south and also from west to east.

It is popularly supposed that the drainage of all the municipalities mentioned in this memorandum is closely connected, but this is not the case, the drainage of Nyhatty and Baraset being quite distinct from, and independent of, that of the other municipalities. These two municipalities will therefore be considered separately from the others.

Nyhatty —No radical change is necessary in the drainage of the Nyhatty Municipality which finds its way naturally through numerous creeks and khalls in the municipality either into the river Hooghly on the west, or into the paddy fields on the east, and does not flow into, or in any way affect, the drainage of other municipalities. But although the existing main drainage channels of the Nyhatty Municipality are well situated and adapted for the purpose for which they are intended, many of them, through the neglect of years, have become silted and otherwise obstructed, so that at present they do not by any means act freely. When an uninterrupted flow of water in these channels is secured—and this should be done as soon as possible by removing the silt and other obstructions—the drainage of Nyhatty will be satisfactory. The drainage channels recently constructed in this municipality answer the purpose for which they are intended.

purpose for which they are intended.

Baraset.—The natural flow of the drainage of this municipality is in a south-easterly direction principally through the Southee Nadi into the Kocho Beel shown in the map. There are main drains running through the municipality, which receive almost the entire drainage of the southern and western portions of the town and carry it in a southerly direction into a beel, called the Koctoorsuhee Beel, from which it passes in a south-easterly direction over low-lying paddy fields till it finds its way ultimately into the Kocho Beel, some five or six miles south of Baraset ward. The drainage of the western portion of Baraset would probably be much improved and brought under the control of the municipality (which it is not at present), if it were diverted in an easterly direction along the Ghola or the Takurpukur road into the Sonthee Nadi. In the absence, however, of levels which have not yet been taken, it is impossible to advise definitely on this point. The drainage of the northern

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and eastern portions of Baraset at present finds its way into the Sonthee Nadi. If the natural flow of water in this nadi was uninterrupted, the drainage of Baraset, after the proposed improvements, would be all that could be desired, but at present it is very much and very seriously obstructed by numerous fishing weirs, or kumars as they are called in the vernacular. These weirs, which are constructed in the bed of the river at intervals of 100 yards more or less, have so seriously impeded the flow of the water as to make it stagnant in some places. There is no serious objection to the erection of fishing weirs out of, or on either side of the main stream, but in the interests of the health of the people inhabiting the municipality, the construction of weirs in the stream itself must be absolutely prohibited, by law if necessary. Steps should be taken at once by the Municipal Commissioners to cause the removel of the existing weirs from the main stream so as to obtain an unobstructed channel of the least 20 feet wide. Until this is done, and any uninterrupted flow of water obtained, there will be no appreciable improvement in the health of Baraset, which ought to be a very healthy place, but cannot possibly be so as long as the darinage is interrupted by fishing weirs in the Southee Nadi. The municipality should bear the cost of removing the weirs, not only in that portion of the nadi which runs through the town, but also in the portion between the town and the Kocho Beel.

North Barrackpore, South Barrackpore, Baranagore, Cossipore-Chitpore, North Dum-Dum, South Dum-Dum, and Municktollah.—The drainage of these municipalities is very closely connected, though that of North Barrackpore and the northern portion of South Barrackpore, including the cantonment, the civil station and the park, may be separated from the drainage of the southern portion of South Barrackpore and other municipalities named above. I propose, therefore, to deal with the two systems separately. In North Barrackpore and the northern portion of South Barrackpore there is little need for interference with the existing arrangements, as the drainage, where it does not flow directly into the river, finds its way through the main drains, marked by thick black lines in the map, in the direction of the arrow marks into the Dunka Khall in South Barrackpore, and thence into the river. All that is necessary in this area is to clean up and improve the levels of the main drains, which at present are very defective in some places. It will also be necessary to make a new drain to the east of the Pulta Water-works, and to connect it with the main drain running to the north-west of the Barrackpore Cantonment. A new drain should also be made to connect the drainage in the south-east corner of North Barrackpore with the Dunka Khall in the direction shown in the map. The drainage in the vicinity of the Samnaggar Jute Samnaggar Jute

in the direction shown in the map. The drainage in the vicinity of the Samnaggar Jute and Cotton Mills also requires attention, as at present it is very defective.

The drainage of the southern portion of South Barrackpore and the remaining municipalities except Manicktollah, which will be considered separately, is the most difficult to deal with. At present almost the whole of the drainage of this tract accumulates in the Cossipore-Chitpore and North and South Dum-Dum Municipalities to the detriment of the health of the people living in those towns. The Bagjulla Khall shown in the map and its branches are the natural main drainage channels of this locality, and flow through the salt-water marshes to the sea. But the khall north of the Jessore Road is considerably silted. salt-water marshes to the sea. But the khall north of the Jessore Road is considerably silted up in places, and in its present condition acts more as an obstruction than as a help to the drainage of the municipalities which it serves. I have travelled down the greater portion of this khall in a "dug-out," and seen for myself how seriously it is obstructed and how inefficiently it acts at present. The khall is admirably situated to receive the drainage of the surrounding country where naturally flows in its direction, and it should therefore at any cost be kept in good working order. It should not only be re-excavated in the places where it has become silted up, but a sluce with sufficient waterway should be constructed in the part where it cuts through the bund, which is at north of the salt-water marshes. The proposed sluice would prevent the tidal water from the salt marshes backing. The proposed sluice would prevent the tidal water from the salt marshes backing up, as it does at present, the drainage of the municipalities served by the Bagiulla Khall, especially of the South Dum-Dum municipal area which includes a European Cantonment. The cost of re-excavating the Bagjulla Khall and constructing a sluice in it must of course be met, in proportion to the interests involved, by all the municipalities benefited, viz., by the South Barrackpore, Baranagore, Cossipore-Chitpore, North Dum-Dum and South Dum-Dum Municipalities, and by the Dum-Dum Cantonment. I feel sure that all these municipalities will gladly contribute towards the cost of a scheme which is calculated to render their towns more healthy and attractive than they are at present. The Dantia and Khurda Khalls should also be sluiced. The latter is already sluiced, but the waterway provided in the sluice is not sufficient: it should be increased. In connection with the drainage of these municipalities it should be mentioned that the syphons passing under the main pipes of the deutta water-works do not, I understand, work properly owing to their becoming silted and occasionally and at such times obstructing the free flow of drainage through them. These syphons should never be allowed to become silted up even temporarily.

The drainage of the Manicktollah Municipality is all that remains to be considered.

At present it is very much impeded by the tides in the salt-water marshes preventing the free passage of water from the town into the tidal khall which lies to the east of the Calcutta Circular Canal. I have inspected the locality in question in a "dug-out," and am of opinion that to remedy this evil a sluice should be constructed about a quarter of a mile from the east end of Ballyaghata main road in the position shown in the map; and as this arrangement will also benefit the drainage of the Cossipore-Chitpore and South Dum-Dum Municipalities, which have their natural outfalls through this khall, they should contribute in proportion towards the cost of constructing the sluice. It is very desirable that the xciii

construction of this sluice, as well as of that recommended for the Bagjulla Khall, should be entrusted to a competent engineer, as they are very important works, involving technical knowledge and engineering skill, and the least mistake in their construction will defeat the

object for which they are recommended.

The question of main drains having been considered, the next question is with regard to the construction of small or minor drains in connection with the main drains. As far as possible, drains already in existence should be utilized, their levels being attended to and their width and depth increased, if necessary. It will, however, be necessary to construct a few their width and depth increased, if necessary. It will, however, be necessary to construct a few new drains; but as this is a matter which does not necessarily require any special engineering skill, it might easily be undertaken and carried out under the direct supervision of the Municipal Commissioners at a comparatively small cost, the selection of sites and other details connected with the drains being left to the judgment, tact and ability of the Chairman and the Municipal Commissioners. It is not absolutely necessary, except in the case of low-lying rice fields, that the drains should be perfectly straight, so that if in any case there is any difficulty in inducing persons through whose land it is considered desirable to run the drain to give up the necessary land for the purpose, a diversion might be made which would be much cheaper than acquiring the straight piece of land under the law. I cannot, however, think that land-owners will make any serious objection to the construction of a drain through their land if the importance of the work is explained to them. In making drains, the Commissioners should be careful to see that sufficient waterway is provided in the culverts. One of the greatest mistakes hitherto made in drain construction in vided in the culverts. One of the greatest mistakes hitherto made in drain construction in this country is the insufficiency of waterway provided in culverts. I cannot therefore impress this matter too strongly on the attention of all Municipal Commissioners.

WATER-SUPPLY.

In semi rural municipalities such as all those under consideration, except Cossipore-Chitpore and Manicktollah, there is no need at present for a filtered water-supply, tanks specially reserved for drinking purposes only being in most cases all that is necessary. As to the great importance of keeping drinking water sources as pure and as free from contaminations as possible so much has recently been written both in the annual report of the Sanitary Department for 1888 and in a special circular issued by this office, that I need not go over the same ground again in this memorandum, but simply invite the attention of the Municipal Commissioners to the correspondence referred to, and ask them to do all in their power to carry out the advice and instructions therein given. In some places there is on their power to carry out the advice and instructions therein given. In some places there is great need for improvement in this respect; for example, in the northern portion of the Nyhatty Municipality, viz., in Golabari, the water at present used by the people for drinking purposes is that of the Bhuger Khall, which being really drainage water is most unwholesome. The people unfortunately have no alternative but to use this water, as the river has as it were been shut out from them by the formation of a large chur which has diverted the course of the Bhuger Khall in a southerly direction past Golabari. If this khall were bridged, which might be done very cheaply and easily, it would enable the people to cross over to the chur and walk across it and draw pure drinking water from the river—a boon which would be much appreciated by them. This is only a single instance of the many cases that exist of impure water being consumed by the people, and the simple and inexpensive means by which it might be improved. The Municipal Commissioners will probably know of numerous other instances, and will, I have no doubt, deal with them as it seems best to them. There is already an instance in the Nyhatty Municipality of a simple and inexpensive means by which the existing water-supply has been improved in the case of Kanchrapara, where Mr. Rendell, the Locometive Superintendent of the Eastern Bengal State Railway, has provided a cheap filtered water-supply for the 2,000 railway employés resident in that locality. The source, however, from which the water is obtained, viz, the resident in that locality. The source, however, from which the water is obtained, viz, the Bhugar Khall, is contaminated, so that even though the water is partially filtered before being consumed it is more or less impure. I would invite the attention of the Railway authorities to a machine known as Anderson's revolving purifier lately introduced into this country by Messrs. Burn and Company, which is cheap and particularly well adapted for the purpose for which it has been invented. In the Cossipore-Chitpere and Manicktollah Municipalities, but specially in the former, which is densely populated, there is urgent need for a filtered water-supply, and in Cossipore-Chitpere the feeling not only of the Municipal Commissioners, but also of the rate-payers, is in favour of such a scheme which should be introduced as soon as possible. With the consent of the Calcutta Corporation, which I have no doubt could be obtained, the water might be supplied from the Calcutta system, the no doubt could be obtained, the water might be supplied from the Calcutta system, the Cossipore-Chitpore Municipality paying for the extra machinery, &c., that may be required at Pulta, and any reasonable sum of money which the Calcutta Corporation may demand, either in a lump sum or as an annual payment for the use of the main pipes from Pulta to Cossipore-Chitpore; or it may be possible to amalgamate the Cossipore-Chitpore scheme with that proposed for Howrah; both these Municipalities paying the Calcutta Corporation in proportion for the amount of filtered water supplied to them from the Calcutta system.

The Manicktollah Municipality is also in need of a filtered water-supply, but as the municipality is much too poor to pay for the cost of such a scheme, the matter may be held in abeyance for the present, tanks being specially reserved for drinking purposes. The Municipal Commissioners must be very careful to see that the tanks are properly reserved, for the municipality, is very thickly populated, and the danger of contamination of the water is thus very great. no doubt could be obtained, the water might be supplied from the Calcutta system, the

thus very great.

CONSRBVANCY.

Except in the Cossipore-Chitpore and Manicktollah Municipalities and the portions of the other municipalities where it is already in force, there is no necessity at present to introduce the Latrine Act throughout the municipalities dealt with in this report which, for the most part, are semi-rural. In crowded localities, however, the Act should be introduced and strictly enforced, the night-soil being trenched in suitable fields, in the manner already suggested to all municipalities in this office circular No. 148, dated the 16th November 1888. As regards Cossipore-Chitpore and Manicktollah, however, there is not an acre of available land for the trenching of the night-soil of those municipalities, which, I believe; has hitherto been emptied into the Calcutta night-soil sewers; but the Calcutta Municipality have, I understand, intimated their intention of prohibiting this practice in future. If this is true, it will place the abovenamed municipalities who have nowhere else to dispose of their night-soil in a serious predicament, and probably result in an epidemic of sickness, which there is very little doubt would react upon Calcutta. It is therefore in the interests of Calcutta to allow the night-soil of the Cossipore-Chitpore and Manicktollah Municipalities to be disposed of as hitherto in the Calcutta sewers, and I hope the privilege will not be withdrawn.

: conclusion.

In conclusion my thanks are due to Mr. A. Smith, Commissioner of the Presidency Division, for the valuable hints and suggestions he was kind enough to give me with regard to the present enquiry, to Colonel Boughey, Manager of the Eastern Bengal State Railway, for allowing me access to the railway office records for the purpose of ascertaining levels, &c., to Mr. Nicholson, Superintendent of Way and Works, Eastern Bengal State Railway, for assisting me in working out the levels and the position of culverts, &c., to Babu Radhica Prosad Mukerjee, District Engineer of the 24-Pergunnahs, for his help and advice in engineering matters connected with the localities dealt with in this report of which he has had a long experience, and to the Chairmen and Vice-Chairmen of the several municipalities inspected for their hearty co-operation with me in the course of my enquiry.

W. H. GREGG, M.B.,

Sanitary Commissioner for Bengal.

The 21st January 1890

APPENDIX No. V.

STATEMENT SHOWING THE SANITARY CONDITION AND THE MORTALITY FROM SMALL-POX, FEVER, CHOLERA, AND BOWEL-COMPLAINTS OF SOME OF THE VILLAGES IN BENGAL, WHICH FOR WANT OF THE NECESSARY INFORMATION WERE NOT DESCRIBED IN APPENDIX IV ATTACHED TO LAST YEAR'S REPORT.

Statement showing the ratios of Deaths from Small-pox, Fever, Cholera, and Bonel-complaints in each Registering Circle in the Bengal Province, and the sanilary condition of the Villages in the Circles during the year 1889.

Debi	Name of Greie. Debipar—Rural Bankipar—Rural	.noitein							The state of the s
) (**	Pop	Smeil-poz,	Fever.	Cholera,	Bowel-com-	Drainage.	Water-supply.	Domestic cleansing.
	kipur-Rural	48,465	i	91.8	01.1	**	Is on the whole defective. A khall discharges part of the surface water into the 'iver Hughli. A narrow fair-weather road and the metalled Futta-Birsai road pass through some of the villages.	Is obtained from tanks, many of which are shallow and dry up in summer.	No conservancy arrangements exist in any of the villages in this thans. Defocation is carried on in waste mots and fields. The village paths are used by the children as public latrines. The Hindus cremate their dead on the bank of the khall and the Mahomedans bury theirs close to their houses.
		107,275		9-91	3	; \$	The natural drainage of the villages in this than is defective.	Drinking water is taken from tanks, some of which are in good condition.	There is no conservancy arrangement. The Hindus cremate their dead either on the cited-up bed of the Advances or on the brake, and the Mahomedans bury theirs close to their beris or on the banks of tanks, the water of which is used for drinking.
	Kulpi—Rerat	9,319	ė	16.30	. 132	7	The natural drainage of the villages in this than is to some extent free. There are many khalls which carry off the rain water.	Drinking water is obtained from tanks.	Conservancy is compicuously absent. The burning and bursi arrangements are similar to those of Bankipur thana. In some villages burial takes place close to tanks which are reserted to for drinking purposes.
									,
Dinagepore Вапя	Bansihari – Zerol	128,18		23. 23.	;	į	The whole of the tract is low-lying and subject to inundation, and is much intersected. by rivulets and chains of julis.	The whole of the tract is low-lying and subject is obtained from rivers and jinis, and in the inland to inundation, and is much intersected by tracts from wells and tanks.	No conservancy arrangements exist. Defocation is carried on promiscrously, and refuse and cowdung are allowed to lie about in heaps in front of houses.
4.									
Sat lu Chittsgone	Sat kanya – Rered	147,615		25.6		81.	The villages in this thans are mostly on the isane level with the surrounding fields, and sare intersected by the small brackles of the treer Dolloo, which ries in the hills on the south of the than and fall into the river Surgoo. During the rains these villages are liable to be flooded on the south, east and west. There is not a sincle good road, but there are a large number of narrow tortone village paths running along rice-fields and waste lands which mostly remain under waste during the rainy season.	Is obtained for the most part from tanks, except in a few of the villaces, the people of which draw their water-supply from rivers. Although there are a larve number of tanks in every village, very few of them are kept clean. Mort of the tanks have raised embankening which are planted all round with thick rows of bemboo and other trees, the leaves from which fall into the water draking.	The dwellings consist for the most part of thatched houses with walls of lose bamboo and reed mata, and are surrounded on all sides by plantain beta-lust and offler frees which interfers with rides per lation. They are built in groups, each group being separated from the other by the interretion of rice-fields. The court-yards of houses are spacious, but they are test way succeed. The cast is no conservancy arrangement. The sides of the village paths and sanks, and the banks of the river Dolloo and the waste lands, are used by the people as public latines. Dead castle are thrown into waste hands as well as on the hearts of castle are thrown into waste hands as well as on the hearts of antices. Cremation is carried on on the banks of rivers and burials are performed in the compounds of meighbouring hills, and burials are performed in the compounds of meighbouring hills.
7	Chaksris—Rural	88,883		15.50	į	à	The villages are generally situated on a rather high level. They are intersected by a large mumber of big rivers and their branches, and are surrounded all slong the north and east by a rance of hills and jungles. Some of the villages are liable to be flooded during heavy rains.	Is mainly obtained from rivers, the beds of which being sandy, the water is clean. There are also several good tanks which are freely used by the people.	The dwellings consist of ill-sentilated, mat-walled, thatched hate which stand on well-raised earthen floor. Their courty state, though specious, are very unitedan, all sarts of house-reture, including cowdung, being collected in them. The central former and which them. The central Conservancy axangements nil The dead cattle are thereinto numby and waste kned, and sometimes into the river. The arrangements regarding the disposal of the dead are similar to those in thans flethanis described above.

			PER	RATIO OF DEATHS FROM- PER 1,000 OF POPULATION.	ATHS FR POPULAT	OM -	SAKIT	SAKITARY BSTIMATE OF VILLAGES IS EACH CIRCLE USDER THE HEADS OF	sder the hisde of—
District.	Name of Circle.	Population,	Smell-poz.	Fever.	Oholega.	Bowel-com-	Drainage.	Water-supply.	Domestic cleansing.
Chittagong	Cox's Basar—Baras	62,817	i	14.15		+4.	The villages are mostly situated on a higher level. They are in many cases surrounded by hills and jungles, and are liable to be flooded during heavy rains. The river Bagkhally which flows through some of the surrounding receives the drainage of the surrounding country. The main road from Cax Barar to the outpost of Ramoo passes through several villages.	Is mainly taken from tanks, most of which are unclean. There are also a few natural springs which supply water to the neighbouring villages.	The same as in thans Chakaris described above, with this exception that the houses are built much more stronger for fear of wild animals.
	Petras-Rarai	80,548		16%5		# 12	This thans is situated just on the see shore, and is covered with hills and impenetrable jungles. Drainage is fair in many villages.	Is party from tanks and party from hill-streams. The majority of the former are very unclean, and dry up during the hot weather, when the sufferings of the people become very great.	Same as in thana Chakara described r bove.
Lozuferpore	sisamurhi—Nunici. polity.	6,125		16.97	\$0.	2	Is on the whole defective, All the reads in except use, are kutcha, and are not provided with proc. side-draine. There is a nullah between Kakibaar and Sitamurhi, which drains serve the water from the adjoining localitier arto the river Luckhondes. Pits and ex. s. anions also receive part of the surface drainage. A slutoe star has been constructed to a revent the town from being flooded by the overflow of the rivers Lackhondes and Blagmatity during heavy rains, but it has done no good.	is is from rivers and wells. The road-cide wells are If puces and have raised parapets, but none of them are provided with drains for the passace. In of spill-water which soaks into the soil and makes the surromainer flithy. There are only three tanks, the waver of which is quite until for drinking. At the time of the metal the drinking, as mustly in this fown, the people generally use the water of one of these tanks.	The dwalling-houses are mostly mnd-walled with thatched or tiled roofs and are often defective m internal ventilation. There floors are damp. The conservancy staff is juite inadequate for the whole town, and surface-cleaning is not property done. There is no public latrine, and the private once are few in number. The majority of the propele generally case themselves in correct convenient place. The night-coil from the private privice is not properly disposed of, but is thrown outside municipal limits. There is no fixed burist-cround nor burnur staff; both burist river.
Chumparan	Dhaks-Rarai	253,988	ţi.	9 5		5	The majority of the villages in this thans It are stitused on elevated ground, and are surrounded by low-lying paddy-fields. Drainage from them is more or less free, but in places it smuch impeded by pits and excarations, some of the villages which are allusted on the bushs of the free Sitrahans and other small rivulets are flooded when these streams overflow their banks. There are lew kulcha roads which are studded with pits and hollows.	Is obtained from rivulets, tanks, and wells, but chiefly from wells, some of which are provided with Iraised parapet walls; the majority are not properly protected from inward dramage.	The dwelling-houses consist of ill-ventilated mud-walled huts. The cuttle-siteds are built close to them, and the cettle orderer is deposited here and there, and allowed to decompose till removed to the fields for manuring purposes. There is no conservary arrangement. The people invariable seas themselves wherever they find it convenient to do so, Cremation takes place on the banks of the river Shrahans and on the sides of tanks and rivulets, while burnal is performed at a safe distance from the villages.
, mais	Motheri—Rerol	166,441	1.0	10-20	55	6.	Most of the villages in this thans being on the plains, the natural drainage is not free. Fits, excavations and the julia receive the arrived trainage. It he main drainage chan- nels are the rivers Kekarha and Dha- moty. Almost all the roads are kutcha and provided with sufficient waterways.	The wells, which are the chief source of drinking water, are not properly protected, nor are their surroundings kept clean. The industrininate dipping of water-pots is very general.	The plinths of the houses are low and the floors are damp. Both domestic and personal eleminess is angelected. Fluid retuse focus into the soil, and evaporates, and solid retuse is rectlessly thours about. There are no latrines; the people in general elements in every convenient place. The cattle ordures are to properly disposed of, and dead bodies are eremated on any waste land. The Rathomedans are buried close to the villages.
,	Govindgaoj - Barel	165,002	\$	ž.	3 3	11.	Many villages in this thans lie on the benks I of the river Nazainy, and they are protected from floods by an embarkment. The natural drainage, which is chiefly effected by the rivers Diamoty and Nazainy, is not free. Pits, accorations and lakes receive part of the surface drainage. All the main reads are kutchs.	Is obtained chiefly from wells. They are neither properly prokeded, nor are their surroundings kept clear. The spill water sagentses and decomposes around them, and percolates into the wells through the porous soil, and pollutes the water. The undiscriminate dipping of water-pots is general.	The dwellings consist of small huts with thatched rook, and walls made of foot or mats. Their floors are damp. Geanlines is neglected by most of the people, and the refuse matters are thrown here and there. The people defences in any convenient place. The eattle are close to dwellings, and the ordure is deposited here and there, and allowed to decompose the ordure of or manuring purposes, and allowed to decomburial are performed at the outsities of villages.

_	Mudhuban-Rural	105.096	\$1	10.01	3	rs.	Same as in Dhaka (rural) described above.	Same as in Dhaka (rural) described above.	Same as in Diaka (ruru) described shows	
	Betish—Reral	349,972	1.01	9.11	ä	01.	There are no properly constructed roads or drains in the rillace. The natural drainage is towards the fields, but part of it is received into pie and excessions. In some rillages nullable drain away the surface water. Many villages are subject to inundation from the river shikrabara.	Is generally obtained from wells. Tank water is used in some places, while the river Sikrahana supplies water to the villages stuated on or near its banks.	Almost all the dwelling-houses are small huts. Conservancy artenuesherus nil. The habits of the people are fittay. Deforestion is carried on everywhere. Dead bodies are generally cremated on the bank of the river.	
Champerun	Hurdi and Lowyn - Eurol.	716,191	EI .	18:05	\$	10.	There are no properly constructed roads or drains, the village foot-paths serving the latter purpose. Pite, exacutions and surrounding fields receive the surface derainsee. Some of the villages are liable to be flooded by the rivers during heavy rains.	Is supplied chiefly from wells, many of which are provided with parapet walls up to the scriace level. The chief rivers are Sirahana, Bel'ore, Paudore and Kortoba, but their water is seldom used for druking.	The dwelling-houses are generally thatched or tiled huts and are ill-ventished. Persons and domestic cleanliness is much reglected. The cartle sheds are built close to the dwelling-houses, and though cleaned daily, they are not free from stench. Cattle ordure is deposited in and around the premises. Conservance of a serving arangements in. The moule dedicate as convenient are fair in most villages.	
,	Adspur—Beral	158,968	60 82	12.14	£.	è	The villages being generally situated on high and raised grounds, drainage is to some extent free, and flaws towards the surrounding fields. The village foot-paths serve the purposes of roads as well as drains.	Is generally taken from wells, which are neither properly protected nor are their surroundings kept clean.	Personal and domestic cleanliness is generally neglected, Conservancy arrangements nil. The people deficeate everywhere, Gemation is carried on close to villages and on banks of river.	
	Baguha—Rarol	140,800	1.10	21.36	ş	.i.	Is defective. Pits, excavations, and surrounding fields receive the surface drainage.	Is obtained chiefly from wells, some of which are not properly protected from inward dramage. The surroundings of most of them are very unclean.	Pits, excavations, and surround. Is obtained chiefly from wells, some of which are 'The plinths of the dwelling-houses, consisting chiefly of small not properly protected from inward dramage. The surface drainage. The plinths of the dwelling-houses, consisting chiefly of small not form their floors damp. The sanitary condition of the villages in this thanks is similar to that of Hardi (rural) in every respect. The dead bodies are cremated on waste lands close to villages.	
	Kesuriah Ksrai		9 9.	23	32.	60.	Most of the villeges in this thans are situated on high grounds, and the drainage from them is more or less frey. The railway line, however, obstructs to a great ratest the drainage of the villages the ush which it passes. Pickexavantanes, and the fields receive the surface drainage. There is no properly constructed thanks. Some of the villages are studied to nundation from the fikurhans and Lukra river.	Is obtained from wells, many of which are properly protected from inward drainnes. There are rivers and rivalets, but their water is not used for drinking purposes.	The dwelling-houses are scattered and freely verifiated. The cattle-sheds are close to houses, but are kept clean. Some of the villages are filthy. Occaservancy arrangements exist. The psople defocate at convenient places. The Hindus cremate their dead on the banks of rivers, and the Mahomedans bury theirs close to villages.	XCIX
						1				
	Basta - Bural	71,138	ti.	9	10-91	7.47	Most of the villages in this thans being situated on high grounds, the natural drainage is fairly good.	The water-supply is obtained from tanks which have a sufficient supply of good water throughout the year. Khalis and wells are scarce. Some villages receive their water-supply from the	The villages are generally surrounded by bamboo topes and trees. The dwelling-houses consust of much base, and are in one cases well ventilated. The outbe-sheds are kept very dury. Cowdung and house-eweepings are heaped up in and	

Balancerel	Basta—Reral	71,186	II.	9	6-46	5.	7.67 Most of the villages in this tham being The situated on high grounds, the natural has drainage is fairly good.	e water-supply is obtained from tanks which tre a sufficient supply of good water throught the sare. Khalis and Vells are scarce. Sone liages receive their water-supply from the scoburnatekha.	the villages in this than being The water-supply is obtained from tants which The villages are generally surrounded by hamboo topes and on high grounds, the natural have a sufficient supply of good water through. The devillage the course of much halfs and well sare searce. Some cases well rentilated. The cattle-sheds are kept very nilages receive their water-atppy from the premise. Conservate the countries are heaped up in and around the premise. Conservately in and around the premise. Conservately in the famous and around the premise construction is convenient places, that in some cases outside are good.
	Johnsone-Rural	168,108	ģ	75.11	\$	2.	7.47 The villages are mostly situated on high Is of grounds, and the drainage from them is fairly fitz good.	obtain-d from tanks which contain seed water required the year. The water of Scoburreths is also used in many villages. Wells e very scarce.	uges are mostly situated on high Is obtained from tanks which contain good water The dwelling-houses are in many cases fairly ventilated. The said the drainage from them is fairly from the year. The water of Scoburhabits of the people are cleanly. The houses and the cathle navels in a large water of Scoburhabits are generally kept clean. Beyond this conservancy are greated as a rangements are nil. The arrangements are nil. The arrangement under the head of the disposal of the dead is satisfactory.

-			RATIO PER 1	MG 40	RATIO OF DEATHS FROM-	10%.	SAUTTARY B	SAHITARY BETIMATE OF VILLAGES IN BACH CIRCLE UNDER THE READS OF	DER THE HELDS OF—
Pastrict.	Name of Circle.	Popunavion.	Small-pox.	Fever.	Cholers.	Bowel-oom-	Drainage.	Waker supply.	Domestic cleansing.
Bilasore	Baliapal - Rurof	88.236	8	11.38	97.01	2.68	The villaces being situated in fairly elevated Suffici grounds, the drainage is free. There are no proper roads in any of the villages. Foot- paths and cart tracks are the only thorough- fares.	Sufficient supply of good water is obtained from tanks, khalis and streams throughout the year.	The dwelling-houses consist of clean and well-wentilated mudhuts, and are built apart from each offset. The abits of the people are cleanly. Covadung and other retuse matters are collected at a distance from the houses. Covasheds are spart from the dwellings, and are kept perfectly clean. Both gremation and informents are generally carried on outside the village.
Lonarduggrah	Rents or Remunds	64,300		13.00		à	Same as in tharms Theria and Nircha des The weribed below. There is no roat, but village well footpaths which are as a rule narrow and during generally full of rubbish.	The water-supply is obtained from natural springs, we'lls and streams, which are more or less subject to pollution. Many of the streams dry upduring the hot weather.	The dwelling-houses are of the same description as in thanse Jhara and Nirsha. The cattle-abeds are built close to the houses and are very dirty. No conservancy arrangements exist in the rillages. The people resort to the adjacent fields for defecation. House-refuse and cowtung are collected in beaps mer the house. Cremation is performed on the banks of mer thems, while burials take place on waste lands situated not more than 400 yards from the houses.
	Toto-Rural	89,078	1	8 4 -81		⊕ Ø Ø	The village is this thana are situated on The elevated grounds surrounded by mango- kweling poddy-fields. There are no jungles or bils near the villages. The roads are generally narrow, filthy and drainless.	The water-supply is obtained from daries and katche wells. The supply is sufficient and good.	The dwellings of the people consist of and-walled buts roofed with tiles or thatches of straw and gress. They are generally erected on low plinths, and are ill-rentilated, but the floors are not damp or unclean. The compounds are, however, drend dirty from the acrumulation of eatiled ang and house-reluse in them. The cattle-sheels are generally close to the dwellings, and are filthy and badly ventilated. The villacers resort to the adjacent folids for delreasion. Dead eatile are thrown on the neighbouring waste lands. Arrangements with regard to cremation and burial are estisfactory.
	Obses-Rerat	89,173	Ş	12.60	8	ĕ	The natural drainage is fairly good. Narrow Is chiefly reasts chiefly serve the purposes of drains in season carrying off the surface water to the fields. (small bathing)	Is chiefly obtained from jores (streams). In dry season, water is received by excavating chate (small holes) in their beds. There are numer ous bandha, the water of which is also used forbathing and cooking purposes.	The dwelling-house are generally thatched huts with low floors, The internal ventilation of them is not sufficient. They are overcrowded and kept dirty with hone-educe. The eather are housed in sheds within the compounds, People resurt to the surrounding fields and open spaces within the bustiss for defectation. The lindus burn their dead by the side of the
Manbhoon	Jharis—Bavel	1 50.00		14-63	- 53	*	The villages being mostly aituated on an ele- Is gen vated ground, the natural drainage is in to pr great extent free. The roads are kutcha and to the dirty.	Is generally obtained from tanks that are subject to politation. The river Damuda supplies water to the villages situates on its banks.	The dwelling-houses, which consist of small, thatched or tiled and hurs, are crowded together and ill-ventilated. Refuse-matters are allowed to accumulate near the houses, the insertors of which are not often kept detan. There is no conservating arrangement, and the people case themselves at convenient places. Cremation takes places on the brains at convenient branches and on waste lands. The Mahomedans bury their dead generally outside the villages.
	Nirshs—Bares	(20)°93	¥	8.91	3	8	Most of the villages in this thana are situ- sted on high greened, and the draimage from them is good. The drainage from tank through some of the villages. Through some of the villages.	Water-supply is chiefly obtained from wells and tails which are open to all sorts of contamination. Some of the wells have puces parapers, but more have puces, drains, and the ground round them is sloppy. The water-supply is also obtained from rivers.	The dwelling-houses are generally built rather close to each other. They are low-plinthed, mud-walled huts with tiled or thatched roofs. Their surroundings are often dirfy. The village paths are not clean and retine-play are common. There is no conservancy are agenerat. The neighbouring fields are reserved to for the purpose of nature. The Hindu dead are burned on the banks of rivers and wase lands, while the Mahomedans burnet hut dead as a distance from houses.
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								Particulars regarding the sanitary condition of the villages in these thanss are not yet available						•										
93.	\$	*	ន	81.	3	66	ş	25	ŝ	7.	13.	ş	*	.2.I	4	ş	8	*8	-11	8	2,58	ş	97.	2
1.66	28.9	1.13	39.	5.24	19.	*78	\$.10	27.20	ķ	25	91.	¥	29.5	1.47	3.41	9	*	7	25	*	\$3 \$3	**	şi	3
18.78	12.18	11:00	14.81	17-48	18.10	91.91	12.01	89.6	19.11	14.04	18.47	11.86	12.62	10-34	11.84	1671	10.68	16.76	52 ,38	1678	14.76	12.00	8	27
\$	\$	Þ	-000	60	ì	3 2.	9 5.	\$	85	10.	9	\$	ģ	\$5	D.	\$	5	æ	97.	ង	91.	19 .	3	Š
143,012	256,250	198,238	101,573	81 2,201	29,158	58,985	465,137	187,340	288,967	127,079	310,444	244,539	222,516	146,116	831,483	279,604	306,463	326,606	151,640	270,461	139,861	245,027	309,875	27.37.42
Jaffarganj – Rucel	Polong Barel	Jamahur-Rarel	Dewanganj - Barol	Jagnænathdighi – Rarat.	Mobeskhalli-Reral	Dinspur-Town	Sitamurhi, Belsund, and Belamochia- nia - Eard.	Katra-Eural	Parco and Budraj-	Lalganj-Raral	Mah va-Rural	Hajeepur and Mah- war-Eural.	Poopree (Jeley)-	Shewhur-Rural	Durbhanga - Rural	Dolsinghseroi ,.	Tajpore ",	Nagarbasti "	Khajowli	Phoolparss	Madhubani ,,	Roserah "	Rahera	Beniput:
Dacea	Paridpore		Mymensing {	Tipperalt	Chittagong	Patna				M.anformore 4		-						•	Imphone		. 9			-

n 3

			RATI PBE 1	RATIO OF DEATHS PROM- PER 1,000 OF POPULATION.	POPULAT	10K-	SANIT	SANITART ESTIMATE OF VILLAGES IN RACH CIRCLE UPDER THE HEADS OF-	NR THE HEADS OF-
District,	Name of Circle,	Population,	Smell-pox,	<u>F</u> 6401.	Cholera.	Bowel-com- plaints.	Drainage.	Water-suppiy.	Domestic cleansing.
	Chupra-Rural	274,365	7	11.1	**	24.8			
	Sewan	301,229	71.	. 33	75.	5.30			
_ -	Gopalganj	. 260,386	ş	6.47	5	1.69	-		
	Manghi	. 149,671	\$	10.18	1.16	<u>\$</u>	***		
Serm	Baragoon	189,483	19.	12.00	33	\$3			
	Dighwara	120,669	è	6.19	ş	38			
	Parsa	231,435	8	25	7	88.1			•
_	Marrith	151,494	ź	5.64	**	\$			•
	Basentpur "	. 210,810	97.	10.20	£	ģ			
	Dermili	. 223,456	<u>e</u>	13-29	-75	82.	Particulars regarding the sanitary condition of	rs regarding the sanitary condition of the villages in these thanas are not yet available.	
						ĺ			
Monghyr	Jamalpur—Rsraf	. 195,238	;	15:17	1.50	5			•
Blaguipore	Bugnon-Bural	149,560.	10.	10.51	1.13	ន			•
	Barway - Bural	51,089	:	97-6	\$6.3	9.69			
Lohardugga	Biru "	190'99	;	25	*	ķ			•
	Bareaund	14,067	:	82.38 88.19	25	**	-		

Office of the Sany. Comme. for Bengal,

The 24th May 1890.

W. H. GREGG, Dip. Publ. Heatth, Camb.,

Sanitary Commissioner for Bengal.

APPENDIX VI.

CIRCULARS ISSUED BY THE SANITARY COMMISSIONER TO MUNICIPALITIES IN BENGAL ON THE SUBJECT (1) OF THE FORMATION OF A SANITARY BOARD AND (2) REGARDING THE REGISTRATION OF VITAL STATISTICS.

CIRCULAR INTIMATING THE FORMATION OF A SANITARY BOARD AND INVITING THE CO-OPERATION OF MUNICIPALITIES IN MATTERS CONNECTED WITH DRAINAGE AND WATER-SUPPLY.

Circular No. 163, dated Calcutta, the 21st October 1889.

From—Surgeon-Major W. H. Gregg, M.B., Sanitary Commissioner for Bengal, To—The Chairman of all Municipalities in the districts of the 24-Pergunnahs, Hooghly and Howrah.

With the view of promoting sanitary reforms in Bengal by helping and encouraging the practical application of sanitary principles to towns and villages, the Government of India have approved the formation of a Sanitary Board, consisting of the Junior Member of the Board of Revenue as President, and the Sanitary Commissioner for Bengal and an Engineer officer as Members, whose chief duty it will be to assist and guide municipalities on important questions connected with sanitation. It is hoped that this Board will be formally constituted on an early date, and it has been suggested to me by several experienced and influential gentlemen, both official and non-official, who are well acquainted with the present condition and requirements of Bengal towns and villages, that one of the first duties of the Board should be to focus its attention on drainage and water-supply—the two measures best calculated to render Bengal towns more healthy and attractive than they are at present. There can be no doubt as to the wisdom of this suggestion, and I feel convinced that, with the co-operation of the Municipal Commissioners, the Sanitary Board will be able to suggest many valuable improvements in these matters. I am aware that a great deal at present is being done in municipalities to improve the drainage and water-supply, but as in most cases the Commissioners' action is not based on professional advice, and as each municipality, especially in the matter of drainage, is naturally apt to work in its own interests regardless of the interests of neighbouring municipalities, it sometimes happens that one municipality acts as a hindrance instead of a help to its neighbour in this respect. The object of the Sanitary Board will be to avoid such inconveniences by taking up, district by district, groups of municipalities the natural conditions of which are more or less the same, and considering, if possible, a comprehensive drainage scheme for the municipalities situated in the districts of the 24-Pergunnahs, Hooghly and Howarh, and m

CIRCULAR ON THE SUBJECT OF THE REGISTRATION OF VITAL STATISTICS.

Circular No. 164, dated Calcutta, the 31st October 1889.

From-Surgeon-Major W. H. Gregg, M.B., Sanitary Commissioner for Bengal, To-The Chairmen of all Municipalities in Bengal.

In my Annual Report to Government for the year 1888, I remarked under the heading "Registration of Deaths" that the recorded mortality in towns taken as a whole showed an improvement in registration in 1888 over 1887, and pointed to the conclusion that Municipal Commissioners as a body took a greater amount of interest in 1888 than they did in 1887 in this important branch of their duties, but that an examination of the figures for 1883 showed that in most towns there was still a palpable deficiency in the accuracy of registration, the effect of which was to completely vitiate any conclusions which might be drawn from them as to the general health of the province. The Government of Bengal in endorsing these remarks observed:—"The registration both of births and deaths is still so extremely defective that no trustworthy conclusions can be drawn from it, either with regard to the general health of the province, or the healthiness of the year under report as compared with that of previous years," and His Honor the Lieutenant-Governor approved my proposal to issue a circular to all municipalities in Bengal, again drawing their attention to the importance of the subject and the many useful purposes which registration fulfils.

2. Since the publication of my Report and the resolution of the Government of Bongal upon it, there has been a marked improvement in the registration of vital statistics of many towns which were formerly very backward in this respect. But while heartily acknowledging this improvement in individual cases, I am constrained to observe that the figures for the province generally are still inaccurate, and show, when compared with the known conditions of several parts of the country, that a large number of births and deaths escape registration. Municipal Commissioners, however, have shown a distinct desire to improve matters in this respect, and I feel convinced that if they persevere in their endeavours and once realize the importance, especially to the Sanitary Department, of accurate vital statistics, and the great responsibility which rests on those who send in inaccurate returns, Government and the public generally would soon have statistics they could rely on in place of the inaccurate figures

that are at present furnished.

3. Registration fulfils many useful purposes. It serves in the first place to facilitate the identification of individuals for the transmission of property and for the protection of life It affords data for the determination of life contingencies, which form the against crime It affords data for the determination of life contingencies, which form the basis of life insurance. Lastly, and chiefly so far as the Sanitary Department is concerned, it furnishes to medical and sanitary science information of the highest value concerning the state of the public health. By means of registration efficiently conducted, the sanitary authorities of any locality are informed of the prevalence of preventable diseases, and are thus enabled to take the necessary measures for the protection of the public health. Moreover, registration reports, taken in connection with the census, yield statistical results which throw light upon the casual conditions ander which prevailing diseases occur, and thereby prove an invaluable contribution to the science of preventive medicine. Registration, however, to be of value must be conducted according to certain general principles which apply to all statistics. of value, must be conducted according to certain general principles which apply to all statistics: the data collected must be uniform and accurate as regards quality, and they must be complete as regards quantity; and to be useful as guides for sanitary measures, the registration returns must not only be complete and accurate, but they must reach the sanitary authorities whom they are destined to enlighten with the least possible delay. Prompt information is no less necessary than prompt action in such matters.

One of the latest and most useful evidences of the value of correct registration is to be found in an interesting and valuable memorandum, published with the Annual Report for 1887 of the Sanitary Commissioner with the Government of India, on "Cholera as a preventable disease" by Surgeon-Major G. Hutcheson, Officiating Statistical Officer to the Government of India, which embraces and summarises the statistics of cholera in the contonments and jails of Bengul for the past thirty years. It is demonstrated, chiefly with the aid of the accurate death statistics kept in the cantonments and jails, that the mortality from cholera in the European and Nativo armies and among prisoners has declined to a remarkable extent in sevent as compared with former years. Dr. Hutcheson concludes his memorandum in the

fallowing forcible language:-

[&]quot;It is an indisputable fact that the incidence of the disease is greatly less in all more or less protected communities than it was, and that the average mortality from cholers was cent. per cent. more during the 15 years antecedent to 1873 than it has been during the more recent period. This enormous decrease in mortality, among troops and prisoners, is readily proved in whichever way the vital statistics be examined with reference to every section of the protected or partially protected communities. Again, where local sanitary protection is greatest, and palpable sanitary defects are fewest, there the improvement, as shown, is marked by the enormous total of 1,300 per cent. greater mortality in former as compared with later years. Such a demonstration of the preventability of a disease like cholers may serve to strengthen the hands of those to whom sanitary reform in India means the removal of sanitary blots stigmatized throughout the civilized world; and the mitigation of an ever-recurring pestilence which numbers its victims by tens and hundreds of thousands."

Had no record been kept of the mortality in cantonments and jails, or had that record been inaccurate and untrustworthy, preventive medical precautions could not have been satisfactorily adopted, sanitary authorities could not have known where to direct the operation of sanitary laws, and the death-rate among troops and prisoners, instead of declining as it has done, would probably have increased.

5. There is no reason why registration in municipalities should not be as accurate and trustworthy as it is in cantonments and jails, and I trust that the remarks made in this circular will have the effect of stimulating the energies of Municipal Commissioners, and inducing them to take a greater amount of personal interest in future in the correct registration of vital statistics, the extreme importance of which has now been pointed out to them.

MUNICIPAL DEPARTMENT.

SANITATION.

DARJEELING, THE 20TH JUNE 1890.

RESOLUTION.

READ-

The Report of the Sanitary Commissioner, Bengal, for the year 1889.

Dr. Gregg, who was in charge of the office of Sanitary Commissioner throughout the year, has again submitted a clear and concise report.

2. A period of nine years has elapsed since the last census of Bengal was taken, and the population of the Province, which at that time was sixty-six millions in round numbers, has now no doubt considerably increased, probably in the proportion of at least one per cent. per annum, and it may be confidently assumed that the population of Bengal now exceeds seventy millions. But as there are no trustworthy data upon which the increase can be estimated as in European countries, the census of 1881 is still accepted by the Sanitary Commissioner as the basis of all calculations in his report, and the small improvement in the registration of vital statistics, which the returns of the year show, is therefore discounted to some extent by the fact that the ratios are calculated upon the same population as in previous years.

3. Births are at present registered in Bengal in towns only. It is pointed out by the Sanitary Commissioner that in other provinces births are registered in rural areas as well as in towns, and that there is no reason why Bengal should be backward in this respect. The registration of births was discontinued in rural areas because of the extreme incomment of the extreme incomment of the extreme incomment of the extreme incomment. because of the extreme inaccuracy of the statistics collected, and the Lieutenant-Governor is disposed to think that it will be better to wait for some time longer, until birth statistics in towns and mortuary statistics generally are compiled with more efficiency than they are at preset, before complying with Dr. Gregg's suggestion. Births are now registered in 137 municipal towns with an aggregate census population of 2,422,994. The ratio of registered births is only 22.76 per thousand, the ratio of male births being 12.05, against female births 10.70. Dr. Gregg observes that the supposed standard of birth-rate in India is 40 per thousand, and it is probably even higher than this. There are indeed 6 Municipalities in Bengal in which the statistics of birth exceed this ratio; but there are no less than 15 in which the statistics are so imperfectly recorded that the ratio is less than 10 per thousand. Among these is South Suburban Municipality, where the ratio is 7.47. In four Municipalities—Muktagacha, Jhalokati, Goberdanga, and Nasirabad—the ratio is less than 5 per thousand. . In a large and wealthy Municipality like Patna the ratio is only 1298, in Buxar it is 14.71, in Purneah it is 15.45, in Midnapore it is 15.73, in Jessore it is 16.71, in Dacca it is 17.71, in Cuttack it is 17.83, in Berhampore it is 18.89, and in Krishnaghur it is 19.68. When the registration in important Municipalities, at the head-quarters of districts, is still so defective, it appears to be hopeless to attempt registration with any approximation to accuracy in rural areas. It is true that the registration for 1889 shows a slight improvement over that of 1888, when the ratio of births was only 20 63; but the result is still very discouraging, and shows that Municipalities as a body do not pay attention to this elementary and very necessary portion of their duties. The Licutenant Governor has observed that during the current year, according to the statements published weekly in the Gazette, birth registration is still extremely deficient.

. The same remarks are applicable to the registration of deaths in Municipalities. The registered mortality in 1889 was 25.03 per thousand, against 24.86 per thousand

in 1888. The statistics recorded vary very widely in different Municipalities, as the following figures will show:—

	1689.	1888.	Mean of 1884-88.		•	1889.	1888.	Mean of 1884-88.
Poorce	71.4	82.9	50.8	Cuttack	•••	20.0	16.2	17.6
Purulia	49.5	5Q 3	2 8·8	Furreedpore		19•1	8.8	21.3
Rungpore	47.2	3 3 6	33· 7	Arrah	•••	16.8	21.6	16 7
Serampore	46 O	40 6	38.6	Krishnaghur	900	16.3	14.8	28 5
Ranigunge	42.3	45.1	30.8	Patna		15.3	51.0	22 5
Gya	42.2	49.3	49.8	Chittagong	•••	15.0	18.7	21.7
Jamalpore	88 B	88 7	3 9·0	Santipore	•••	11·7	9.4	18.5
City Moorshedabad	37.9	- 33.8	89·4	South Suburban	•••	11.2	127	147
Utterpara	37· %	29 0	2 3: 7	Ranaghat		10.9	· 6.6	11.4
Baranagore	36·8	3 0.6	24·4	' Kishoregungo	•••	10.9	8.4	17.5
Dinagepore	83.4	31.2	2ì·9	Baduria	•••	8.6	10.5	11.9
Hoogbly	31.8	2 7·5	39.1	Tangail '	•••	5.3	9.2	189

The small improvement effected in the registration as a whole during the past year may be attributed to the special circular issued by Government on the subject, and to the action taken by the Sanitary Commissioner in supplementing the instructions then promulgated; but the registration in many Municipalities is still deplorably defective. There can be no reason why, under proper administrative arrangements, the registration should not be as complete at Patna and Arrah as it is at Gya, for instance, or in Ranaghat and Santipore as it is in Serampore and Utterpara. The South Suburban town is again conspicuous for its imperfect registration. The two newly created Municipalities of Cossipore-Chitpore and Manicktollah, where, in the former case, a mortality is registered of 38.9 per thousand, and in the latter only 14.5 per thousand, afford a marked illustration of good and bad work in adjoining localities. It is obvious that these figures supply very little scope for any observation on the comparative health of Municipalities during the year.

5. The registration of deaths is, however, effected throughout the whole province, and not in towns only, and when the whole area is taken into consideration, it is possible, notwithstanding the imperfection of registration, to deduce some important results. The total number of deaths registered in Bengal during 1889 (excluding still births) amounted to 1,597,478, against 1,515,735 in 1888, giving an annual death-rate of 24.25 and 22.94 respectively. As, in the opinion of the local medical officers, the year under review was not on the whole a more unhealthy one than 1888, the higher death-rate can only be ascribed to better registration, and the improvement, so far as it goes, is therefore satisfactory. The statements which are given of mortality according to sox and age enable some inference to be drawn of the respects in which registration is most deficient. Of the total number of deaths, 856,574 were males and only 740,904 females. The ratio of deaths is 26.2 males and only 22.3 females. As, according to the Census of Bengal, the number of females is slightly in excess of males, it follows that there is a special deficiency in the registration of female deaths, and further examination shows that this is the case in every district. The figures of death, according to age, give an infant mortality of 172.0 per thousand for infants under one year of age, and 26.7 for children of one year and under five years. Although this is the highest rate of infant mortality yet recorded for Bengal as a province, there are reasons

, a	. (Calcutta	•	Provi Ben	nce of
	1886	1887	1888	1888	1889
Ratic of mortality under one year of age Botween one and five	404-1	298-5	413.9	162-9	172.0
years	57-6	48.5	51.8	25.8	26.7

for believing that it is very much below the actual mortality. The statement marginally given shows in parallel columns the ratio of mortality among children in Calcutta compared with the ratio given for the past two years in the Sanitary Commissioner's reports, and the only inference which

can be drawn from the figures is that the mofussil registration is very imperfect. Both in the mofussil and in Calcutta the infant mortality bears a proportion to the total mortality of all ages of about 31 per cent. But in Calcutta the number of children, for reasons which have frequently been explained, and which it is not necessary to re-state, is very small. The number of children under five years of age is only 6 per cent. of the total population. In Bengal, generally, the number of children under five years of age is no less than 16 per cent. of the population. The fact that the registered mortality of children shows the same population to the total population in Calcutta and in

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, a	. (Calcutta	Province of Bengal.		
	1886	1887	1888	1888	1889
Ratic of mortality under one year of age Botween one and five	404-1	298-5	413.9	162-9	172.0
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the mofussil is therefore conclusive evidence of the deficiency of registration in the mofussil. There is no reason for believing that the actual infant mortality in Calcutta is materially higher than it is in other parts of Bengal. It is only necessary to add that in the mofussil the registration of the deaths of female children is conspicuously deficient, and that of the total number of deaths under five years of age 258,518 are male and only 225,513 are female deaths. The Lieutenant-Governor hopes that the Sanitary Commissioner's attention will be given to these figures, and that in future reports their meaning may be further elucidated. The question of infant mortality in India merits special enquiry from a statistical point of view, and it would be interesting to compare the figures now furnished for Bengal with those of admitted accuracy in Europe.

6. The Lieutenant-Governor observes that in none of the districts of Bengal is the total registered mortality below 15 per thousand, and acknowledges that this is an improvement over previous years. The registration is worst in Mozufferpore (15.78), Chumparun (16.52), and Durbhunga (17.64). In the 24-Pergunnahs the ratio is only 18.74. This result is not creditable to the police of these districts. The districts in which registration has been most suc-

			Pau tha	For the munici-
			For the	pal head-
			district	
	_ •			quarters.
	Backergunge		30.71	· 22·14
	Cuttack		30.54	20:03
	Beer bhoom		27.43	20.64
•	Shahabad		· 27·06	16.68
	Patua.	•••	26.60	15.98
	Howrah		23.99	22.71
	Nuddea		22.27	16:37
	Chittagong		21.33	15.09
	Furreedpore	•••	20.96	19.0

cessful are Poorce (44.4), Balasore (38.9) Darjeeling (36.2), Julpigoree (33.2), Noakholly (32.0), and Purneah (31.0). The figures given in the margin are quoted as showing that in many districts the registration of deaths among the whole population of the district (excluding nunicipalities) is more successfully accomplished by the executive police agency

than it is at the municipal head quarters of districts, where special arrangements and special laws are in force for ensuring accuracy, although, as the result shows, without effect.

The province from cholera, showing the high ratio of 259 per thousand of the population. The disease prevailed with much severity during the hot weather, especially in the month of April, when there were 33,003 deaths. The diagrams furnished with the Sanitary Commissioner's report are exceedingly interesting, and a great improvement over those given in former years, as they show for each district the incidence of cholera in proportion to the population, and not, as was formerly the case, the number of cholera deaths only. The most remarkable feature in the cholera history of the year is the excessive mortality in the Orissa Division, especially in Pooree. The ratio of deaths from cholera in the Pooree district was no less than 20 of per thousand, in Balasore it was 13.74, and in Cuttack it was 8.29. With the exception of Purneah, in which the cholera mortality was 9.5 per thousand, the Orissa Division stands out in marked prominence as the home of cholera during the past year. The remarks of Dr. Walsh, the late Civil Surgeon of Pooree, on the prevalence of the epidemic in the town of Pooree, where the deaths from cholera were 23 per thousand on the population of the town, are quoted by the Sanitary Commissioner, and though objectionably worded they indicate a condition of affairs which imperatively calls for

improvement at the hands of the municipality. He writes:—

"The increase of cases from February to March coincides with the arrival of 20,000 pilgrims for the Dol Jatra. These people are tired, and, as regards health, below par; probably also one or two of them are already suffering from the premonitory stage of cholera when they enter the town. While in Pooree they eat hardly anything but the Mohaprosad rice prepared in the temple and the half-ripe fruit and vegetables which are exposed for sale in the streets. The Mohaprosad is often sold to them after it has been kept for days. It is then in a fermented condition, unwholesome, and liable to bring on diarrhea, the general precursor of cholera. The tanks also in the town of Pooree are all extremely holy and extremely filthy. It is the duty of every pilgrim to drink out of all these sacred tanks, and it is the oustom of many of them to defile the tanks either with feeces or urine before they tirink. The cholera poison is thus easily spread among a large number of people in a poor state of health, and very susceptible to the attacks of any infectious disease. The permanent inhabitants of the town draw their drinking water, as a rule, from public or private wells, and do not suffer much from cholera. January, February, August, September and October give a total number of nine deaths only. These are the months during which only very few pilgrims visit Pooree. In short, the chief causes of cholera in Poorce are fatigue after long

journeys, unsuitable or unwholesome food (both these predisposing causes prepare the subject and render him susceptible to the action of the cholera poison), and active cholera germs communicated by tank water. If the pandias were only amenable to the elementary forms of reason, or if the Municipal Commissioners would display a little more firmness and desire to improve the health of their fellow townspeople, much might be done to reduce this source of danger. A mandate in the name of Jagarnath would stop the people from drinking indisoriminately from all the tanks, and one tank might be set apart and used only for drinking purposes. For a time the municipality, acting on my advice, forbade bathing in a certain selected tank, but they did not remain firm, and gave way to popular opinion, which seemed to be in favour of making this tank as dirty as all the rest. Until the people learn, or are forcibly taught (by means of section 277 of the Indian Penal Code), that water used for drinking purposes must not be defiled, so long will it be impossible to check the prevalence of cholera during the religious festivals in Pooree."

It is deplorable to think that the rate of mortality from cholera alone in the town and district of Pooree—a mortality which is largely due to preventable causes—was not less than the rate of mortality from all causes combined

in an ordinarily healthy city or rural area in more favoured countries.

8. The outbreak in Purneah, of which the figures have already been given, was the severest known for years. It is supposed to have originated at the Caragola Fair, and so to have spread over the district. The insufficiency and impurity of the water-supply along the principal roads and communications in all the districts of Bengal is undoubtedly a prolific source of cholera. Dr. Gregg truly observes:—"Until the water-supply of the province is improved, and adequate sanitary arrangements made at fairs and other places where a large number of people assemble, I am afraid that there will be little or no diminution of the death-rate from cholera in Bengal." And again:—"The well-known predisposing causes, viz., polluted water, local insanitary conditions, imperfect drainage, errors of diet, and importation, are indicated as exciting and favouring, if not absolutely originating, this disease; but, as usual, the evidence is in the main confirmatory of the view that outbreaks of cholera are traceable to pollution of drinking water."

9. The total number of deaths from small-pox during the year was 8,665, or 13 per thousand of the population. The ratio was higher in towns than in rural areas, and this is attributed by Dr. Gregg "to neglect of vaccination, which is not creditable to Municipal Commissioners." The disease prevailed with the greatest severity in Pooree, Chumparun, and Bankoora.

The total number of deaths from fever was 1,101,521 or 16.72 per thousand of the population. The ratio of urban mortality was 10.84, and of rural mortality 16.02.

There is a steady increase, year by year, in the number of deaths recorded from fover, but it is probable that this result is due to improvement in registration and increase in the population rather than to greater unhealthiness of climate. The lowest mortality from fever is invariably in the month of June,

or ordinato.	4 110 10	M CBL IIIO	reality, from fever is invariably in the month of oune,
••		Ratio per	when it gradually rises till it reaches its maximum
Districts.		mille.	during the drying up of the rains in November
Julpigoree		· 29·18	and December. The death-rate was highest in
Noakholiy	.:.	25 77	
Dinagenore		25.74	the 14 districts noted in the margin, and the cause,
Monghyr	• • • • • • • • • • • • • • • • • • • •	24.54	in all districts alike, is attributed to impeded
Darjecling	* *	22.93	
Rajshahyo		22.74	drainage. Many extracts from the reports of Civil
Rungpore	• • •	22.07	Surgeons are given, which show that the prevalence
Jessore		21.44	of malarial force in Dancel is not due to immede
Gya.	•••	2 1·31	of malarial fever in Bengal is not due to inunda-
Maldah	•••		tions, which on the contrary are beneficial to health
Bhagulpore	***		as a means of flushing, and that it is only wher
Hazaribagh	• • •	. 20.84	as a means of mushing, and that it is only wher
Purneah	•••		the surface drainage is obstructed, and the water
thabalad .	•••	. 20.45	sinks into and stagnates in the soil, that the locality

becomes malarious. The Lieutenant-Governor observes that the province of Orissa is remarkable for the comparative absence of fever, and that the district of Pooree, which in other respects has attained the unenviable notoriety of being the most unhealthy district in Bengal, shows the smallest fever mortality. The Sanitary Commissioner's report throws no light on this coincidence, but the point is one which seems to merit further enquiry and explanation.

11. After making the necessary adjustments on account of the amalga-Expenditure on sanitation in Municipality with the town of Calcutta, the total sanitary expenditure incurred in mofassil Manicipalities during the year is reported to be Rs. 12,81,031, against an expenditure of Rs. 11,30,081 incurred in 1888. The principal increase is under the head of conservancy and water-supply. The general result is undoubtedly satisfactory. The Sanitary Commissioner remarks:—"It will be seen that on the whole Municipal Commissioners are doing what they can to improve the sanitary condition of their towns; but although a good deal has been done, and is being done, I am again compelled to remark that in many cases municipal income is wasted on temporary works and on works of minor importance, while works of a more needed, substantial, and lasting nature, such as drainage, water-supply, and public latrines, are neglected." The Lieutenant-Governor is glad to notice that during the present year Municipalities have applied in several cases for loans in order to undertake important works of permanent sanitary improvement, and desires to take this opportunity of again assuring Municipal Commissioners that such applications will always receive the most favourable consideration from Government.

12. The Sanitary Commissioner's report does not touch on the work of sanitation.

Rural sanitation.

Sanitation under District Boards. The truth is that, although the promotion of sanitation is a duty entrusted under the Local Self-Government Act to District Boards, little or no progress is made in this direction, because the Boards possess no funds for the purpose. The Boards in Bengal are not vested with powers to impose local taxation to meet the requirements of local sanitation. And yet no grievance presses more hardly on the people than those which are created by the insanitary condition of the country. Constant complaints come to the notice of Government, through the vernacular press and elsewhere, of the necessity of improved drinking water, and in a hardly less degree of improved drainage, from almost every district of these provinces. The agency for the execution of sanitary reform in rural areas, and the means by which such reforms may be executed, are questions now under the consideration of Government.

13. Dr. Gregg was indefatigable during the year in his inspection of Municipalities and in the preparation of schemes for their sanitation. A copy of his more important inspection memoranda constitutes a very useful annexure to his present report. Since the close of the year a Sanitary Board, consisting of Sir Henry Harrison, Member of the Board of Revenue, as President, and Colonel McNeile, Chief Engineer and Secretary to Government in the Irrigation Branch of the Public Works Department, and Dr. Gregg, the Sanitary Commissioner, as members, has been appointed, and a whole-time officer will be placed at the disposal of the Board as Sanitary Engineer. The function of this officer will be to accompany the Sanitary Commissioner on his tours; to work in concert and concurrence with him in the preparation of designs, plans and estimates; to guide the Municipalities in getting up projects, and, after these have been approved by the Board and under the advice of the Chief Engineer, to inspect the works while in course of construction and report to the Board on the progress made. It is intended that he should be the right-hand man of the Sanitary Commissioner in all matters involving engineering knowledge and experience. The Sanitary Board will be the executive agency through which the Government will act in the Sanitary Department, and it is hoped that, if judiciously worked, it will exercise a powerful initiative and a valuable control in all departments of sanitary work.

14. The thanks of Government are due to Dr. Gregg for the services he has rendered to the cause of sanitation during the year. The Lieutenant-Governor is glad to acknowledge also the good work done by Surgeons Major Gupta and Waddell, and Assistant Surgeon Norendro Nath Gupta, Deputy Sanitary Commissioners of the Metropolitan, Darjeeling, and Eastern Bengal Circles, to which Dr. Gregg draws attention.

By order of the Lieutenant-Governor of Bengal,

H. J. S. COTTON,
Secretary to the Govt. of Bengal.

Oircular No. S $\frac{1-R}{5}$ 14.

Cory of the Resolution, and of the Report, forwarded to all Commissioners of Divisions for information, and for communication to District Officers and all Municipalities within their divisions for information and guidance.

No. S
$$\cdot \frac{1-R}{5}$$
 15.

Copy of the Resolution forwarded to the Sanitary Commissioner, Bengal, for information and guidance.

No.
$$8\frac{1-R}{5}$$
 16.

Copy of the Resolution, and of the Report, forwarded to the Secretary of the Sanitary Board for information.

No.
$$S\frac{1-R}{5}$$
17.

Copy of the Resolution, and of the Report, forwarded to the Inspector-General of Civil Hospitals, Bengal, for information.

No.
$$S\frac{1-R}{5}$$
 18.

EXTRACT paragraph 63 of the Report, and paragraph 14 of the Resolution, forwarded to the Appointment Department for information.

By order of the Lieutenant-Governor of Bengal,

II. C. STREATFIELD,

Offy. Under-Secretary to the Government of Bengal.

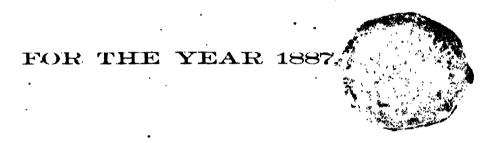
DARJEELING, The 20th June 1890.

TWENTIETH ANNUAL REPORT

OF THE



SANITARY COMMISSIONER FOR BENGAL



INCLUDING BRIEF NOTES ON VACCINATION IN BENGAL FOR THE YEAR 1887-88.

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DEPUTY SURGEON-GENERAL R. LIDDERDALE, M.D., Sanitary Commissioner for Bengal.

Calcutta:

PRINTED AT THE BENGAL SECRETARIAT PRESS.

1888.

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		•		,			•	
· •	•			,	•	Para.	Page.	
detropolitan Circle	B—concluded—							
Sanitary inspection ma		Surgeon	Preumber	Nath	Mittra,			
Deputy Superintender					•••	141.	55	
	de by Assistant							
Rai Bahadoor, Deputy Circle	Superintendent	OI VACCI	nation, or	1 Mietro	boneau	142	5556	
	de by Assistant	.Surgeon	Ashutosh	Law,	Deputy .			
Superintendent of Va		-		•••	•••	143 •	56	
Sanitary inspection ma				•	Deputy		F0 F8	
Superintendent of Va	eccination, Subur	os or Care	utta	•••	•••	144	56—57	
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Commissioner			···		•••	145 •	57—58	
Ditto ditto ma	de by Assistant	t Surgeon	Jogendra	Nath	Bhutta-		•	
charjee, Deputy Supe				•		146 ·	58	
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Ditto ditto by	Baboo Aughore		ckerbut ty ,	Deputy	Super-		•	
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Deputy Sanitary Co						•		
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Eastern Bengal Cir				-		•	•	
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Deputy Sanitary Cor Sanitary inspection ma		 Surgeon T	 Doorga Da	na Pow	Donnter	152	6061	
Superintendent of Va				as itoy,		153	61—63	
Behar Circle—	•				•••		01-03	
Sanitary inspection ma	de by Assistant	Surgeon M	Iothura N	ath Sen,	Deputy			
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Sanitary inspection ma			Bejoy C	comar (Chucker-			
butty, Deputy Super	intendent of vac	cination	•••	•••	•••	155	63	
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TWENTIETH ANNUAL REPORT

OF THE

SANITARY COMMISSIONER FOR BENGAL.

YEAR 1887.

INTRODUCTION.

1. In this report are given the vital statistics and sanitary history of the Province of Bengal for the calendar year 1887, and short notes on vaccination of the Province for the financial year 1887-88, but the statements forming Appendices I and II do not include the figures for the Town of Calcutta.

SECTIONS I, II, III, & IV.

2. Under the standing orders on the subject, the matters dealt with in these sections are omitted from the Provincial Sanitary Commissioner's report.

SECTION V.

VITAL STATISTICS.

3. To facilitate the working of Act V (B.C.) of 1880, the Compulsory REGISTRATION_VALUE OF_IN Vaccination Act, the Government during the year 1886 directed the revival of birth regisRIETH REGISTRATION. tration in a number of towns in the Province.

These events during 1887 were recorded in 100 towns, with a population of 2,311,531. They amount to 44,742, giving a ratio of 19.35 per 1,000 of population, a very imperfect result.

Those towns in which attention was given and there is think

Those towns in which attention was given and those in which registration was manifestly neglected are shown below:—

Approximately correct results.

Towns.		•		Ratio per mille.	Towns			• 1	Rato per mills.
Jamalpore in Mo	onghyr	•••	•••	5 0·21	Sherepur	•••	•••	•••	34.09
Pubna		•••	•••	43.29	North Dum-Dum		•••	•••	33.45
Sewan		•••	•••	39.00	Durbhanga Chattra	. •••	•••	•••	*33·48 31·84
Brahmanbaria	•••	•••	•	87:62 86:24	Monghyr.	•••	•••	•••	31.46
Sitamarhi	•••	•••	• ***	85·61	Kendrapara	•••	•••	•••	30.96
Comillah	•••			35.54	Beauleah	***	•••	•••	30.87
Hazaribagh Bettiah	•••	•••	' •••	34.56	Rajpur	•••	•••	•••	80.82
Assensole	•••	•••	***	34.44					

· Very defective results.

Town	.		1	Ratio per mille.	Towns.			E	ato per mille.
Jehanabad in	Hughli	•••		•66	South Suburban		•••	•••	11.49
Kustea	- ·	***	•••	1.85	Chundrakona	• • •		•••	11.66
Baraset	•••	•••	***	1.89	Dacca	•••	***	•••	12.22
Barisal	•••	•••	•••	2.65	Baduria		•••	•••	12.43
Satkhira	444	•••	•••	3.20	Madhubani	•••	•••	•••	12.50
Nassirabad		•••	•••	8.50	Serajganj	•••	•••	•••	12.97
Boidobatty			***	3.96	South Barrackpore	•••	•••	•••	13.14
Bogra	•••	•		4.04	Burdwan .	•••	•••	•••	18.46
Sudharam	•••	•••	•••	4 68	Naihatty	•••	•••	•••	13.65
Ranaghat	•••			5.75	Bali	***	***	***	14.21
Debhatta		. 0.	•••,	6.16	Purneah	•••	•••		14:58
Kulna	•••	٨.,	•••	6.32	Bansbaria	•••	***	•••	14.64
Bhuddessar	•••	***	•••	6.49	Faridpur			••••	15.10
Kishoroganj	•••	•••	•••	6.66	Puri	***	•••	•••	15.33
Jajpur	•••	•••	•••	6.85	Midnapur	•••	•••	•••	15.37
Chupra	•••	•••	•••	7.19	Purulia	•••	•••	•••	15.90
Nobodip	•••	***	•••	7.23	Baranagor	•••	•••	•••	16.24
	•••	•••	• • • • • • • • • • • • • • • • • • • •		Chybassa	•••	•••	•••	
Joynagor	•••	•••	•••			•••	•••	•••	17:31
Mozufferpore	:	***		8.28	Ramjibanpur Cuttack	•••	• • •	• • •	18.05
Mchorpur	•••	•••		8.54	Bankura.	•••	***	•••	18.10
Jessore	***	***	•••	8.59		•••	•••	•••	18.18
Taki	:	•••	•••	8.88	Goberdanga	•••.	•••	•••	18.52
Ranchi	•••	•••	•••	9.02	Kishnagur	•••	***	•••	18.63
Darjiling	•••			9.15	Barrh	•••	•••	•••	18.80
Rungpore	•••		•••	9.23	Dainhat	•••	:	•••	19.00
Cutwa	•••	• •••	•••	9.38	Suburbs of Calcut	ta.	•••	•••	19.19
English Bazar			•••	9.65	Chittagong	•••		• • •	19.20
Santipur	•••`	•••	•••	10.47	Tumlook	***	•••	•••	19.35
Bussirhat	•••		•••	10.26	South Dum-Dum	• • •	•••	٠	19.42
Kumarkhally		•••	•••	10.59	Patna	٠	•••		19.49
Hajipur	• , •	•••	•••	10.77	Jehanabad .	•••	***	•••	19.86
Kotrung	•••		•••	10 78	Howrah	•••	•••	•••	19.89
Utterpara	•••	•••	•••	19.96					

In other municipalities the rates varied from 20.64 to 29.13. The very defective registration shown has arisen from the neglect of the Municipal Commissioners into whose hands this duty passed from the Police. There is clear evidence of this neglect in the widely-differing ratios of neighbouring towns in the same districts as in Sitamarhi and Mozufferpore and in Jajpur and Kendrapara in the Cuttack district.

4. In a population of 66,163,884, according to the census of 1881, there occurred in the year 1887 1,552,528 deaths, giving a ratio of 23.46 per 1,000, against, 1,455,305 deaths in 1886 with a ratio 21.99.

The mean ratio of the previous five years is 20.96, so that registration is improving, though very slowly. The credit for improved results must not be assumed, however, as the only factor, as it may reasonably be supposed that the population has been going on increasing since 1881, and that a higher death return naturally follows. At the end of the year the estimated population of the Province should be 72,483,411, which would give a death-rate of only 21.41 per thousand.

Arproxima rest	lely correc ilts.			5. I give marginally the districts in which death registration is
Mongifyr Gya Puri Gya Puri Julpaiguri Rajshahye Dinajpur Shahabad Backerganj Rangpur Maldah Elagralpore Darjeci.ng Bogra Murshetabad Nuddea Birbhum Hazaribagh Pubna Lohardugga Patua Chumparun	33 33 33 32 31 29 28 28 27 26 26 26 26 25	Mozufferpore Faridpur	14.96 15.29 15.88 15.96 16.01 17.02 17.54 18.68 18.90 19.43	shown to have had fair attention bestowed upon it by the local officers and districts where it has not. The remaining 11 districts yielded casualty rates from 20.06 to 24.88. Any deductions from the results given in the tables with regard to the health status of the country are unnecessary, as they would be absolutely incorrect. The most unhealthy district in Bengal is Monghyr, but this arises from the energy of the police officer, not the nature of the climate. The rate of Mozufferpore (12.53) only reflects discredit on the district administration.

and is unworthy of further consideration. There are no reasons I know of connected with districts in Behar which render mortuary registration more

difficult in them than elsewhere, indeed the presence of village accountants and European lease-holders of villages would have justified the expectation of obtaining fairly useful figures. The death-rate of Faridpur is lower than that of 1886 and of the mean of the previous five years. It is less than half that of Backergange (31·16), a neighbouring district. A true record is hardly to be looked for in such districts as Singbhum and Lohardugga, but such a difference as Cuttack 18·90 and Puri 33·38 seems inexcusable. In the Burdwan Division correct results would naturally be looked for, but Bankura district gives a rate of 15·95, Serampore 18·68, Burdwan 19·43, and Howrah 19·95. Close to Calcutta as the last three districts are, much better results might be expected. It is evident that in this division as in others registration has not had the attention the great importance of the matter demands.

not had the attention the great importance of the matter demands.

6. Exclusive of still-births, 1,552,528 deaths are recorded during the year, giving a death-rate of 23.46 per mille, in comparison with 1,455,305 and a rate of 21.99 in 1886, and a mean-rate of 20.96 in the previous five

years. I have before shown that taking the estimated population of the Province at the end of the year 1887, the ratio deducible from the very incorrect figures submitted to this office is 21.41, which is, I believe, about half the true rate in many districts. The provisions of Act IV (B.C.) of 1873,

Names of mulnicipalities.

Districts.

Names of municipalities. of births and deaths, were extended during 24-Pergunnahs Baraset. the year to the towns mentioned in the Nuddea Chagdah. Jessore Aessore. Birth registration was not revived margin. Khulna. Khulua ... Jungipur. Madaripur. Moorshedabad ... in any of the municipalities in Bengal Faridour during the year. Jamui. Mongliyr.

7. In obedience to the orders of Government the statement below is given, showing the municipalities in which prosecutions under the Act were instituted

during the year:-

	•	ated.	ted.	ted.	off.	ť	Ä	fines 70	RATIO PEI POPUL	1,000 OF ATION.
DISTRICTS.	Towns.	Number prosecuted.	Number convicted,	Number acquitted.	Number struck	Number warned,	Number pending.	Amount of fi	Births.	Deaths.
Burdwan	Burdwan	1 42 10 4	1 86 8	 3 2 	 8 	 :::	::: :::	Rs. A. P. 0 1 0 72 12 0 8 1 0 2 0 0	13°46 27°05 19°00 6°82	21:33 28:25 30:22 17:16
Bankura	Bankura	7	7					- 1 12 0	18.18	12.53
Metnapore	Midnspore	6 24 3 10 4	6 23 3 8 4	₁	•••		•••	1 4 0 7 0 0 4 8 0 14 4 0. 5 8 0	15'37 19'35 27'03 18'05 21'44	19°45 26°63 14°00 19 06 42°89
Hughly and Seram-	Hughly Seramjore	18 7 12 3	15 6 9 3	2 1 3 	 		 	9 14 0 2 0 0 4 8 0 0 8 0 0 2 0	20°58 12°08 27°47 3°96 19°96	26°91 39°39 39°10 11°27 18°36
24-Pergunpahs {	Augurpara	4 10 5 18 26 4 43	1 9 13 26	2 5 	1 43		•	0 8 0 10 8 0 2 4 0 11 9 0 4 0 0	9°80 21°01 - 10°56 16°24 80°92 13°65 18°33	20:84 25:30 10:46 25:61 24:01 10:99 7:62
Nuddes {	Kishnagore	1 1 2	1 2	·		•••	 •:::	0 8 0 2 0 0 1 8 0	18 ⁻ 63 5 ⁻ 75 6 ⁻ 83	21°72 0°38 17°04
Jesnore	Kotchandpore	9	9					480	Not under	26.75
	Berhampur	1.1	8		3			4 12 0	Parta not	23.17
Murshedsbad {	City Murshedabad	18	18	1			1	8 8 0	furnished, Ditto	42.64
Khutus	Khulna	1	1					0 4 0	8-01•	14.0k
Rajshahyo	Nattore	4	4					8 4 0	Not under registration.	26.72
Rangpur	Rungpur	6	5	1		,	***	8 14 0	8.52	29.0 5
Водта	Sherepur	2	2					0 12 0	18.73	28.67
Pu bna {	Serajeanj Pubna	50 24	287	17	29	:::	:::	19 4 0 1 10 0	12°97 48°29	81:56 82:48

[·] Ratio based on 9 months only, as the registration of briths commenced from April 1887,

		•	ited.	1	4	병] _		fines re		ER 1,000 OF LATION
Districts.	Towns.	•	Number prosecuted.	Number convicted.	Number acquitted.	Number struck	Namber warned	Number pending.	Amount of the	Births, .	Deaths.
		,							Rs. A.		
Dacoa {	Dacca Narsinganj		2 20	2 20		:::	===	:::	4 1 11 12	0 12.22 27.86	15.73 26.59
'aridpur, {	Faridpur Madaripur		8 20	5 15	1	5		:::	1 8 18 18	0 15.10 18.86	11.78 5.96
ackergange {	Barisal Perozepur		2	1 5					0 4 2 8	0 Not under	19°83 72°19
Iymensingh	Sherpur		2	2				•••	18	registration 84'09	37:42
ipperah {	Comillah Brahmanbaria		3 19	3 17		,	:::		5 8 4 . 6	0 35·61 0 37·02	80.18
`atna	Behar		16	14	2				5 4	0 27-60	14.21
hahabad {	Arrah Buxar Bhabuah	••• C	3 6 24	 8 24	.:: :::	::: :::	 			23.03 0 23.89† 0 25.12‡	31°12 21°14 35°96
lozusferpore {	Hajipur Lalganj		6 18	6 18		:::	•			0 10°77 0 23°83	14 [.] 78 21'09
durbhunga	Durbhunga		8	7	1				10 0	0 83.43	26.74
arun {	Chupra, Sewan	• :: :::	1 7		1		:::		6 0	0 7·19 39·00	8.20 8.20
humparun	Motibari		19	17	2				4 0	0 22.70	31.63
longhyr {	Monghyr Jamaipore		10 13	5 8	- 5 5	:::	:::			0 81.46 0 50.21	25'10 33 '90
Shagulpore {	Bhagulpore Colgong		365	4 2		8	:::	4 2		0 28.78 Not under	30°47 30°50
urnesh	Purneah		. 11	10	1				7 12	registration- 14'58'	30.03
ialdah {	English Bazar Old Maldalı	:::	1 2	1	₁	:::	:::	•		0 9.89 9.39	9·89 27·65
uttack {	Cuttack Kendrapara		45 3	38	5	2	:::			0 30.89	16:87 22:10
alasoro	Balasore		82	61		21			18 12	Not under	24.37
azaribagh {	Hazaribagh Chuttra		147	119	27	1	:::			registration. 0 35 54 0 31 84	30°24 31°42
ohardugga	Ranchi		3	3				•••	2 12	0 9.05	11.92
ingbhum	Chybassa		7	7					2 4	0 17:31	26.64
aubhum	Purulia		5	2	3	<u></u>	<u></u>		2 8	0 15.90	19.88
•	Т	Cotal	931	710	301	112		8	450 14	0:.	*****

* Ratio based on 9 months only, as the registration of births commenced from April 1887, † Ditto 7 ditto ditto ditto ditto June 1887, ‡ Ditto 6 ditto ditto ditto ditto * July 1887.

This statement generally shows that where the provisions of the Act were not utilised especially with regard to births, registration was disgracefully neglected. The results obtained in Chupra, English Bazar, Boidobatty, Ranaghat, Ranchi, Burdwan, and other towns sufficiently illustrate this. That the Municipal Commissioners of Ranchi presided over by a European Deputy Commissioner, should institute only three prosecutions and realise in fines the sum of Rs. 2-12, while the birth and death-rates of their town only reach 9.05 and 11.92 respectively, reflects very little credit on their administration. Only 931 persons were prosecuted, of whom 710 were convicted, or 76 per cent., and a sum of Rs. 450-14 realised as fines, in 68 towns of the Province. In 1886, 994 persons were prosecuted in 61 towns, and the fines recovered were Rs. 424. The feeble administration of this useful law is a matter to be much regretted, as with its assistance reliable statistical information could easily be obtained.

BIRTH STATISTICS.

8. Leaving out of consideration 1,385 still-births, 44,742 children were born in 100 towns in the year 1887, giving a birth-rate of 19.35 per mille of a population aggregating 2,311,531. In 1886 a birth-rate of 21.04 per 1,000 was obtained from a population (1,650,855) distributed in 45 towns. The death-rate in the towns under birth registration in 1887 was 24.33, giving an excess of death-rate over that of births of 4.98.

Of the children born in the year, there were 23,718 males and 21,024 females, giving ratios per 1,000 of population of Births according to sex. 10.26 and 9.09 respectively, and there were 1,128

boys to every 1,000 girls.

Births according to Class or Nationality.

	LA DILI IO	-				
CLASS OR NAT			NUMBER O	BIRTHS.	RATIO PI	IR MILLE.
CLASS OF NAT		III.	In 1887.	1888.	1887.	1886.
Christians Hindus Mahomedans Budhists Other classes			408 81,963 12,904 8 50	454 24,207 10,000 10 63	21·10 10·23 19·74 8·64 11·85	25*81 20*92 21*26 4*72 15*79

10. The marginal table shows the facts as recorded, and that with a more extended area under registration there has been a proportional fall under all classes of the community. As before, Christian and Mahomedan births are better registered than among Hindus.

11. which recorded highest proportion of births, fairly correct sex birth rates, and excess of births over deaths. .

In the statement below the municipalities are exhibited in which the highest proportion of births was recorded, in which the relation of male to female births is irth rates, and excess fairly correct, and those in which there is an order to be a superficient of the statement below the municipalities are exhibited in which the excess of births over deaths:-

Highest proportion of	Births.	Male born to every 1,00	0 Females	Excess of births over	
Towns.	Ratio per mille.	Towns.	Ratio.	Towns.	Rate of excess per <i>millo</i> .
Jamalpore in Monghyr Pubna Sewan Brahmanbaria Sitamarhi Commillah Hazaribagh Bettiah Assensole Sherepur North Dum-Dum Durbhanga Chattra Monghyr Kendrapara Beauleah Rajpur		Behar Jamalpore in Monghyr Beauleah Durbhun a Shahebganj Purulia Sherepur Monghyr Faridpur Sewan Revilganj Hazaribagh Cuttack Chattra Bettiah North Dum-Dum Kishnagur	1005	Jamalpore in Monghyr Behar Ghattal Sitamarhi Assensolo Pubna Bishenpur Kendrapara North Dum-Dum Brahmanbaria Sewan Curbhunga Monghyr Bankura Commillah Hazaribagh	
Revilganj	29 13	South Barrackpore Gya Suburbs of Calcutta Narainganj Lalganj Baduria	1076 1078 1079 1083 1087	Chittagong Baduria Jamalpore in Mymens South Dum-Dum Faridpur Lalganj Howrah Arrah Cuttack Utterpara Barrh Narainganj Chattra Busirhat	, 5·02 4·81 ingh 3·85 3·76 2·74 2·34 1·91 1·73 1·61 1·35 1·27 42 10

Returns of the events under this head have up to date been received from Government for only the first three quarters of the year under review. During that period 347 Births among non-Asiatics and Mixed Races. births were registered of which 166 were males and 181 females.

DEATH STATISTICS.

The population used in the computation of the death statistics of Population under registration.

Areas	of Resid	lence.	Class or N	ationality.	by the 66, 163,
In urban ar		2,409,578 63,754,306	Christians Hindus Mahomedans Budhists	1,01,884 42,953,029 21,861,957 79,721	according national dence is
Waynalas		32,832, 2 16 33,331,668	Other classes	1,687,298	The ma

the Province is that disclosed census of 1881, viz., , 884. Its distribution sex, class or $\mathbf{ing} \cdot \mathbf{to}$ lity and areas of resis marginally detailed. ain registering circles into which the Province is

divided are 645, of which 93 are urban and 552 rural.

14. The total number of deaths, excluding 30,438 still-births, was 1,552,528, giving a death-rate of 23.46 per mille.

Number and proportion of deaths to population.

This shows an increase of 97,223 deaths an improved ratio of 1.47 over 1886, and of 2.50 per mille over the lustrum, 1882—86.

15. The following statement shows the mortality of urban and rural circles, and the total for the Province during the past year as compared with that of 1886 and the lustrum 1882—86:—

			In 1887.		, In 1	886.	fr 188	2—86.	INCE: OR DECR COMPARI 188	BASE AS D WITH	INCREASE OR DECREASE AS COMPARED WITH 1882—86.		
·'		•	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio per mille,	, Deaths.	Ratio per <i>mille</i> .	Deaths.	Ratio per mille.	
Urban Rurai Province	:::		.58,122 1,494,406 1,552,528	24·12 23·44 23·46	65,778, 1,38#,532 1,453,405	27·29 - 21·79 21·99	69,845 1,816,932 1,886,797 ₆	24°98 20°65 20°96	7,651 <i>D</i> 104,874 <i>I</i> 97,223 <i>I</i>	3°17 <i>D</i> 1°65 <i>I</i> 1°47 <i>I</i>	11,723 <i>D</i> 177,454 <i>I</i> 165,731 <i>I</i>	4:86 <i>D</i> 2:79 <i>I</i> 2:50 <i>I</i>	

16. Mortality from the specific death causes.

The following table shows the mortality from specific death causes during the past year as compared with that of 1886 and the lustrum 1882—86:—

	RATIO OF DEATHS PER 1,000 OF POPULATION. In 1887. In 1886. In 1882—86.				INCREASE OR INCREASE AS COMPARED WITH 1886.			INCERASE OE DECHMASE AS COMPARED WITH 1882-86.							
•	Urban,	Baral.	Province.	Urben.	Rural.	Province.	Urban.	Bural.	Province.	Urban.	Bural.	Province.	Urban.	Rural.	Province,
Cholora Small-pox Fevers Bowel-complaints Injury Other causes	 3:40 -13 10:45 3:49 -40 6:22 24:13	2:57 *()% 18:46 *76 *40 2:97	*85 *40 8*09	4:12 :09 12:29 3:77 :50 6:51 27:29	1.70 .06 16.11 .73 43 2.74 21.79	1.78 .06 15.97 .84 .43 2.88 21.09	4:32 : 43 13:85 3:72 : 44 6:19 28:98	2:03 -15 14:87 -78 -38 2:42 	2:11 16 14:84 :89 :38 2:56 20:96	78 D 95 f 184 D 29 D 10 D 29 D 5-17 D	*87 I *01 D *55 I *93 I *03 D *23 I *1*65 I	*82 I *01 D *47 I *01 I *03 D *21 I	302 D 30 D 3*40 D *24 D *04 D *03 I 4*86 D	*54 I	*49 I *11 D 1*60 I *02 I *53 I

17. Comparative Mortality in Bengal, Behar, and Orissa.

The marginal table supplies this information and shows that Orissa retains

	R	ATIO PER	MILLE OF	POPULATION	• •
	1887.	1886.	1882—86.	Increase or decrease as com- pared with 1886.	Increase or decrease as com- pared with 1832 - 86.
Cholera.					
Orissa Behar Chota Nagpore • Bengal	2-45	4°18 1°11 °30 8°17	4·18 1·79 ·67 2·29	*69 <i>I</i> 2:54 <i>I</i> 2:15 <i>I</i> *47 <i>D</i>	1961 1961 1751 1892)
Small-pox.	İ	١ .		•	
Orissa	-08	21 11 02 01	*55 *25 *13 *07.	*13 <i>I</i> *03 <i>D</i> Equal Do.	*21 D *1. D *11 D *06 D
Favers.	1 .	·	}		
Benzal	. 15.86	17'15 16:03 12:85 8'02	16:74 13:43 12:26 7:15	*75.I *17.D 2:25.I *45.D	1.16 <i>I</i> 2.23 <i>I</i> 2.84 <i>I</i> -42 <i>I</i>
Bowel-complaints.		•		1	1
Orissa	1'32	- 2:81 :85 :72 :70	8.05 1.11 - 80 - 69	* *38 <i>I</i> *47 <i>I</i> *08 <i>D</i> *04 <i>D</i>	*14 <i>I</i> *21 <i>I</i> *11 <i>D</i> *03 <i>D</i>

its pre-eminence for cholera mortality. Behar stood next in 1887, its large death rate from this cause being the result of the severe outbreaks during the year in Gya, Chumparun and Shahabad. Bengal stands at the bottom of the list in 1887, . with a death-rate of 1.70 only. From small-pox also Orissa affords the highest death-rate, followed by Behar, the two divisions of the Province in which vaccination is very incomplete. Where the protection is fair as in Bengal, a rate of 01 only can be reached. Bengal as usual has the highest death-rate from fever, and in 1887 it exceeded that of 1886, or of the preceding five years.

Behar stood next and Orissa as usual lowest of all. From bowel complaints Orissa suffered most and Bengal least. As the results, however, are unfortunately obtained from very imperfect registration, they must only be accepted as giving general indications of the incidence of disease.

As shown in the margin, the fourth quarter as usual was the one 18.

Seasonal invidence of disease. Increase or dock as compared w 1862—86. compared in 1885 Ucaths in 1887, Parioda. 9 8 8 8 8 854,292 879,789 887,815 428,632 88,706 I 75,157 I 60,582 I 75,223 D 819,883 304,632 43,864 I 62,750 I 63,738 I 4,021 D First quarter... 304,632 827,233 503,847

attended by the highest mortality in 1887, and the deaths rose from the first to the fourth quarter as in the five-year period 1882-86, differing from the year. 1886, when the second was the quarter with smallest mortality. In 1887 there was an increase of mortality in the first three quarters, and a decrease in the fourth in comparison with

the other periods set forth in the table.

Mort	ality accor	ding to sex.	
	Tw 1886.	LUSTRUM	18828

	Iw 18	86.	LUSTRUM 188286.			
•	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.		
Males Females	781,385 673,020	23·70 20·21	750,829 635,969	. 22.86 19.08		
Total	1,455,305	21.99	1,386,797	20.80		

Of the 1,552,528 deaths in the year, 829,330 were males and 723,198 females, giving ratios of 25.25 and 21.69 respectively per thousand of population. These rates are higher than any recorded in the periods marginally given. For every 1,000 females 1,146 males died, which is much higher than the English rate.

Mortality according to age.

The marginal statement gives the mortality according to age in the

	Ix 1887.		In 1886.,		In 1892—86.		INCREASE OR DECREASE AS COMPARED WITH 1886.		INCREASE OR DECREASE AS COMPARED WITH 1882 -86.	
	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio P°r millo.	Deaths.	Rat'o per mille.	Deaths.	Ratio per mille.
Under 1 year 1 year and under 5 years, 6—10 18—20 20—30 30—40 50—60 60 years & above	227,017 244,004 133,846 74,954 76,478 176,555 166,551 141,425 124,191 189,707	145-40 29-81 13-50 11-08 15-01 15-79 17-43 22-13 31-75 50-93	206,914 215,534 120,127 69,561 70,089 105,889 158,424 135,164 120,111 192,893	138-11 20-33 12-11 10-28 14-96 14-96 16-38 21-12 30-71 51-79	173,800 190'293 116,290 70,408 71,942 166,008 158,529 136,616 119,928 183,083	111'81 23'25 11'73 10'41 14'29 14'95 16'59 21'35 30'66 49'15	20,103 <i>I</i> 28,470 <i>I</i> 13,719 <i>I</i> 5,393 <i>I</i> 4,790 <i>I</i> 9,466 <i>I</i> 8,127 <i>I</i> 6,261 <i>I</i> 4,080 <i>I</i> 3,186 <i>D</i>	12:29 I 3:48 I 1:39 I :80 I :95 I :95 I :98 I :96 I :96 D	53.217 <i>I</i> 63,711 <i>I</i> 17,556 <i>I</i> 4,546 <i>I</i> 3,636 <i>J</i> 9,347 <i>I</i> 8,022 <i>I</i> 4,809 <i>I</i> 4,263 <i>I</i> 6,624 <i>J</i>	53:59 I 6:50 I 1:77 I :67 I :72 I :84 I :75 I :70 I 1:78 I

review, comit with paring that of 1886 and the quinquen* nium 1882—84. It will be seen that in comparison with 1886, there were higher rates at all the different age periods except 60 years

and above and higher than in any age-period of the quinquennium.

21. Mortality according to Class or Nationality.

•		In 1887.		In 1886.		In 1882—86.		INCREASE OR DECREASE AS COMPARED WITH 1886,		INCREASE OF DECEBASE AS COMPARED WITH 1882-86.	
•		Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio per mille.	Deaths.	Ratio per millo.
Christians Hundus Mahomedans Budhists Other classes	***	1,529 1,006,375 507,355 1,198 86,074	28.75 16.88	944,699 481,641 1,064	21:90 22:54 13:34	895,744 463,044 908	20°85 21°67 11°88	61,676 <i>I</i> 25,714 <i>I</i> 131 <i>I</i>	1.487 1.817 1.647	110,031 I 44,311 I 287 I	1.69 2.57 2.06 8.60 6.16

The marginal table exhibits this and contrasts it with 1886 and the quinquennium · 1882-86. It will be observed that there is steady rise in

the death-rates of all classes in 1887, comparing them with the other two periods, and that this rise is most remarkable among "other classes."

22. For the reasons stated in paragraph 12 the information under this head represents the mortality of only the Deaths of non-Asiatics and Mixed first three quarters of 1887. During that period 408 deaths were recorded among non-Asiats and mixed races of which 287 were males and 121 females. Of the total number of deaths 36 were caused by cholera, 1 by small-pox, 56 by fevers, 56 by bowelcomplaints, 34 by injury, and 225 by other causes.

в 4

Vital statistics of Calcutta compared with those of Bengal Towns. 23.

Ratio per 1,000 of population. In Bengal In Celentte. towns Births 18:36 24.12 25.34 Mortality from all causes 2·76 ·004 Cholera 3.40 Small-pox ... 7.50 10.45 Fevers ,, Bowel-com-,, ·8·48 ·40 2.76 plaints ... Injury ... Other causes 11.75 6.22

It will be learned from the marginal table that the difference of total mortality between Calcutta and other towns in Bengal amounts only to 1 22 per thousand of population; but while Suri only registers a rate of 5.47 from gross neglect of registration, Jehanabad 5.04, Baduria 7.62, Ranaghat 6.33, Kushtia 9.05, Sudharam 9.36, and so on, it is idle to institute any reliable comparison. The excess of fever

in mofussil towns and of casualties from "other causes" in Calcutta may be explained by the better diagnosis of death causes in the latter. A small-pox

death-rate of .004 in Calcutta is creditable to the sanitary officers. 24. The statement in the margin exhibits the mortality among the

Mortality of Natives in Cantonments.

AMES OF CARTON MENTS.	PER	TIO OF ATHS MILLE BING-	Sickness.	ated popu-		THS	RATI MII DURI	
	1887.	1886		Estimated lation,	1887.	1886.	1887.	1896.
Alipore Dinapore Dorunda Cattack Fort William Darjeeling Barrackporo Jum-Dum Buxa	44 32 32 99 24 69 20 90 18488 13 12 12 50 11 60 9 64	26.85 26.77 26.82 18.21 20.66 11.52 12.88 13.07	Cholera Small-pox Fever Bowel complaints Injury Other causes Total of all causes	84,267	77 422 152 17 157 825	89 . 1 . 364 . 92 . 15 . 172 . 733	2.24 12.31 4.43 49 4.58 24.07	2:60 -02 10:63 2:68 • 43 5:02 21:42

nine cantonments in Bengal during the year under review. A population of 84,267 afforded 825 deaths, against ·733 in 1886 out of The 34,211 residents. total death-rate (24.07) is higher, though those from cholera, small-pox, and other causes are lower. A cholera death-

rate of 2.24 per mille however, is too high, and indicates that the native quarters are capable of sanitary improvement.

25. During the year 1887 23,585 European seamen arrived in the port of Calcutta in 1,027 vessels, while 23,696 PORT OF CALCUTTA. entered in 1886 in 1,036 vessels. The daily average Sickness and mortality among Eunumber in port was 1,893, against 2,326 the year ropean Seamen.

before.

Sickness and mortality are exhibited in the following table:—

1		. 2			3					
		In 16	387.			In	1886.	_		
Sickness.	Admissions into hospitals.	Deaths.	Ratio per cent, of deaths to treated.	Ratio per . 1,000 of population.	Admissions into hospitals.	Deaths.	Ratio per cent. of deaths to treated.	Ratio per 1,000 of population.		
In hospital.	29	19	65.21	10.03	49	26	53:06	11-17		
Diarrhoea	116	. 19,	186	-52	185 106	8	2.83	1:28		
Dysentery Fever, enterio	8 220 -	2 1	25 00 45	1.05	12 321	4 3	83·33 93	1.72		
,, malarious	65	¹			155			1.20		
Scurvy Small-pox	1		*****		1	•••••	*****			
Sunstroke or heat apoplexy Other diseases	1,201	. 11	20.00 :91	5°81	1,875	1 84	25.00 1.81	14'61		
Total	1,719	35	5.03	18:48	2,714	71	2.61	80.25		
Out of hospital.							•			
Harlers		******	*****			1	*****	·48		
Dysentery Sunstroke		8	*****	1.28		1	******	2.12		
Fever, malarious Drowned in port Other diseases		Б.	******	2.64		15 - 11	*****	-48 6·45 4·73		
Total		8	*****	4.53		· 84	*	14'62		
GRAND TOTAL	1,719	48	2.08	22.71	2,714	108	8.61	45'14		

Compared with 1886, there was a large reduction in admissions into hospital, a great reduction in deaths in hospital; and taking the figures of mortality both in and out of hospital, the death-rate for 1887 is little more than half that

of the previous year.

From the table below it will be found that out of the last six, 1887 was the most healthy year, and its cholera death-rate, 10.03 per mille of average strength, is lower than any other except that of 1885 (4.13). The Health Officer remarks that a higher health status of the town is followed by a similar condition in the port:—

	•	٠.	Years.			•	A	RATIO PE	RMILLE	OF AVERAGE	STRENGTH.
		•	I HA ES.	•			Average strength.	Cholers.	,Othe	r diseases.	Total.
In	1887		•••	. •••		•••	1,893	10.03		8.45	18:4
ſη	1886	•••	•••			•••	2,326	11.17	,	19.3	• 30.2
,,	1885	•••		•••	•••		1,693	4.13		19.4	23.6
,,	18×4	•••			•••	•••	1,684	21.3	- 1	23.7	45.1
,,	1883		•	•••		•••	1,860	19.8		23.6	43.5
,,	1882		•••	•••	•••		1,792	' 22 ·8	1	29.0	51.8
			•			•	1 1		ł		

26. The number of deaths at sea of European seamen, according to the official logs, was 47, or a rate of 1 99 per 1,000 on number of arrivals, against 41 deaths and a rate of 1.73 in the preceding year. Of the 47 deaths, 21 were the result of drowning, 9 of other accidents, 4 of heat apoplexy, 1 of carbolic acid poisoning (accidental), 1 from suicide, and 11 from various other diseases.

Sickness and mortality among the native floating population in the port of Calcutta.

27. To get an accurate estimate of the floating population of the port is a matter of some difficulty; but as far as possible corrected for the record the Houlth Officer gives it at 25 630

year, the Health Officer gives it at 25,630.

The table marginally given compares the sickness and mortality during

1 .			2				8			4			
		In	In 1887.				In 1896.			Difference.			
Sickness.	•	Total deaths among sative floating population. Ratio of deaths sper 1,000	Number of native floating population who entered hospital,	Deaths among this number.	Total deaths among native floating population.	Ratio of deaths per 1,000 of population.	Number of native floating population who entered hospital.	Deaths among this number.	Total deaths among native floating population.	Ratio of deaths per 1,000 of population.	Number of native floating population who entered hospital.	Deaths among this num- ber.	
Cholera Diarrhosa Dysentery Fever, malarious ,, simple 8 mail-pbx Other causes Total		49 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1	10 6 3 17	 4 	1	.07 .03 .59	87 9 2 19 101	223 . 1 1 7 	10 D 1 D 8 I 1 D 7 I 2 D	-36 D -08 D -18 I -08 D -06 D	10.70 1.7 4.7 16.70 17.7 49.7	9D Equal 2I "4I "1D 4D	

the last two years, and is favourable to 1887. The cholera death-rate is the lowest recorded since the year 1881. The admissions to hospitals have increased, which is satisfactory, but it is not so to observe that of the 49 fatal cases of cholera, only 27 occurred in hospital, so that the probability is that 22 went without treatment.

28. During 1887 31,420 lascars arrived and 32,640 left the port, against 29,595 arrivals and 28,994 departures in 1886. There were 38 deaths at sea—33 in foreign going and 5 in coasting vessels. Taking the average population affoat as 9,645, a death-rate is obtained of 4.04 per 1,000, as opposed to one of 3.56 in 1886. On four occasions only were complaints made by lascar crews regarding privations suffered on board-ship, but in only one instance was the complaint substantiated. In this instance the men received no vegetables when at sea, and compensation was awarded to them. The lascar crews therefore seem generally to have been well-treated.

29. From a study of the reports submitted by Civil Surgeons, Magistrates, Sub-divisional Officers, and Chairmen of Municipalities, and from an examination of the statistical

returns, I gather that the 17 districts marginally noted had bad health during

Burdwan,
Dinajpor.
Rangpur.
Rajshahye.
Bogra.
Backerganj.
Tipperah.
Gya.
Singbhum.

1887, that in 13 others it was good, and in 15 average or fair. It will be observed among the districts which had bad health how many are included in the Rajshahye, Bhagulpore, Patna, and Chota Nagpore Divisions. The chief causes of unhealthiness were undue prevalence of cholera and fever. The highest mortality recorded in any

district (35.31 per mille) was in Monghyr, owing to the exertions made by Colonel Ramsay to obtain correct registration. The marginal table exhibits, so far as the Magistrate's reports supply the information, a statement re-

Number agric	of dist	tricts i	n whic	h the	Number in v prices grains	vhich . of	the food-	Number of dis- tricts in which the value of labour was—			
А роче в тегаде.	Good.	Fair.	Equal.	Below average.	Higher.	Lower.	Samc.	Higher.	Lower.	Ѕаше.	
1	8	3	0	14	18	11	16	2		89	

garding the agricultural outturn, prices of food-grains, and value of labour throughout the Province during the year. It contrasts unfavourably with the year before, and in Chota Nagpore Division the Civil Surgeon of Lohardugga notes the presence of scurvy among new admissions to jail, indicating that insufficiency of food was affecting the

people of that district. The unfavourable distribution of rainfall, very heavy in May and falling off suddenly in September and October, no doubt seriously affected the harvests.

· Prices generally did not rule higher in 1887 than in 1886, or the average

iverage price of the three pre-ceding years. RAINFALL. Average of preceding years. Difference 1887. e per 7 2 per Fig. Price in 18 Rs, A. P. Rs. A. P. Rs. A. P. Rs. A. P. Inches. Inches. 0 10 2D 0 8 10D 0 0 7D 0 5 5D 2 1 3 8 15 3 2 5 5 7 4 11 1 12 8 3 5 4 2 0 8 6 14 8 2 3 2 7 6 10 9 2 7 3 4 1 Common rice Wheat ... Pulses ... Fish ... 60.02 64.65 of the three preceding years, vide marginal table; but till means of distribution are complete in all districts, local conditions of climate and rainfall affecting crops will always in limited areas react on the health status of the people. The jail sickness and mortality compare favourably with that of

1886, and the slight incidence of cholera among prisoners, even in districts where it was severely epidemic, reflects credit on the sanitary administration of these institutions.

SECTION VI.

HISTORY OF THE CHIEF DISEASES.

CHOLERA.

Prevalence and fatality Cholera in the Province.

1	tatio per 1,	oo of popul	tion.
In 1837.	In 1886.	In quin- quennium 1882-86.	In decade 1877-86.
2.60	1.78	2-11	1.82

The year 1887 will be remembered as one of very widespread prevalence and heavy mortality from cholera. \mathbf{T} he deaths were 172,578, against 118,368 in 1886, 139,869 in the quinquennium 1882-84, and 120,503 in the ten-year period 1877-86. The death-ratio in 1887 was 2 60 per 1,000 of population, a very heavy one, which is contrasted for the several periods above mentioned in the marginal table.

The disease prevailed epidemically in registering circles, severely in 73, with slight

severity in 466, and was absent from 18. Its incidence in 1886 was epidemic

in 72 circles, severe in 73, with slight severity in 457, and absent in 43.

The number of villages attacked in 1887 was 23,894, against 21,567 in 1886, giving percentages of 10:30 in 1887 and 9:33 in 1886 of all the villages in the Province, or an increase of .97 per cent. for the year under roview.

In towns the deaths numbered 8,215, against 9,935 in 1886, and the former is a smaller number than in any period marginally given, but the death-ratio in 1887 of 3.40 is higher than the rural rate 2.75, or of mortality from Cholera in the urban and rural

any previous average rural rate of periods the registration of which was

.T CENTER	De	aths from	n choler	· —	Ratio per 1,000 of populatio				
	In 1887.	In 1886.	In • 1882-86.	In 1677-86.	ľn 1887.	In 1886.	In 1882-86.	In 1877-88.	
Urban Rural	 8,215 164,363	9,935 109,483	10,412 129,458	9,223 111,289	3°40 2 75	4.15 1.46	4°82 2°03	8:82 1:74	

Districts which suffered most from Cholera.

Districts.	Ratio per mille.	Districts.	Ratio per mille.		
Puri Gya Chumparun Shahabad Lohardugga Backerganj	9·75 8·05 7·50 7·15 5•82 4 67	Balasore 24-Pergunuahs Sarun Monghyr Faridpur Patna	4.60 3.66 3.46 3.45 3.20 3.01		

The table given in the ma

Seasonal incidence of Cholera in the entire Province.

Mo	nths.		Deaths in 1887.		Rainfall in 1887.	Deaths in 1882-86.
January	•••	•••	16.662		1.50	8,424
February	•••	***	5.804		.04	5.815
March	•••	•••	8.924		2.63	10.877
April	•••		21,088		1.27	21,075
May	•••	•••	32,435		8:49	18,209
June	•••	•••	21,188		11.12	12,043
July	•••	•••	30.566		11.50	10.228
August	••	•••	19,268		11.20	11,000
September		•••	5.761		7.93	6.971
October	•••	•••	2.946		3 51	7.404
November		•••	2,748		•56	12,114
December		•••	5,208	•	.0002	15.709
		 . •	-,		•	,

approximate to the truth. deaths in rural areas rose to the large number of 164,363, giving a death-rate of 2.75, which is the highest of any period with which it is marginally contrasted.

32. The marginal table exhibits the 12 districts in the Province which had exceptionally high mortality, against nine in the previous year. Of the 45 districts in the Province, 22 had higher casualty rates and 23 lower than in 1886.

ws that the year began with a very heavy mortality in January, a continuance of the severe winter outbreak of the year before, which continued with marked diminution in February and March, succeeded by the usual seasonal rise in April, which followed by maximum severity up to August, when the disease coincident with heavy rain abated. The deaths in September, October, November, and December compare very

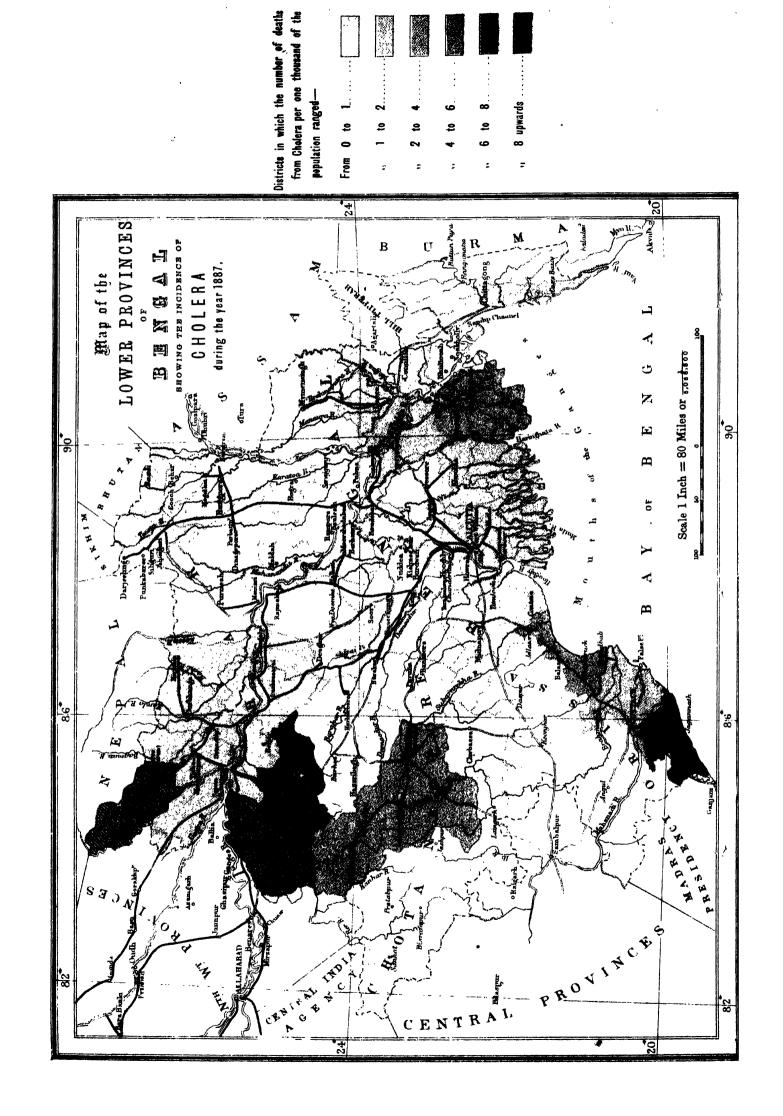
favourably with those of the quinquennium 1882-86. The heavy loss of life in May, June, July, and August illustrates the special incidence of the disease in Behar and Orissa, only with an earlier commencement than usual, and great aggravation following the cyclonic storm of the 25th, 26th, and 27th May, during which the barometer registered as low as 27.522° on the 26th at Hazaribagh. The comparative immunity of the later months indicates the slight prevalence of the disease in Lower Bengal.

34. In accordance with Government order No. 2328 of the 10th August 1886, a table of meteorological conditions is given below during the prevalence of cholera at Motihari in Chumparun district, and at Buxar, Dehri, and

Arrah, three towns in the district of Shahabad:—

		nches, ited on riod.	TEM	PERAT	URE	r mois.	Wind,	deaths	r chol-
Loca- LITY.	PERIOD.	Rainfall in mches, average calculated on the days of period.	Meth-of daily maxima.	Mean of daily minima.	Range.	Mean of daily air moisture, 100° being saturation.	. uoistean velocity, miles per diem.	Total of cholers desths recorded.	Daily average of cholera deaths.
E .	Accession. 30 days, from 1st to 30th April 1887	*03 •	93.4	67'2	5 6.5	46. {	8 and 8E 11 days E. ESE 15 ,, W. NE, ENE 4 ,,	43	1'4
MOTIHARI TOWN CHUMPABLE.	Culmination. 61 days, from 1st May to 30th June 1887.	*20	93.6	78.5	17-1	48. {	SE, ESE, SSE 45 R 8 W, SSW. WNW 8	91	1'4
Motin	Decline. 31 days, from 1st to 31gt July 1887	*26	92.0	78.6	13*3	56. {	Calm	12	•
RDS, OF	Accession. 9 days of April	-04	96-8	67:7	28.6	89.5 {	W.N 3 days NW, WNW 4 ., SE, NNE 2 .,	10	1.1
IR TOWN	Culmination. 13 days, 3 days of May, 3 days of June, 7 days of July.	*06	94.2	79.1	3 5°1	90.0	Calm 1 day E, NE 6 days S, W, WNW 6 .,	18	1.4
NOS. 1 AND 2 WARDS, BUXAR TOWN IN SHAHABAD.	Decline. 5 days, 3 days of July, 1 day of August and 1 day of October.	-49	87.6	76-7	10:8	84.0 {	E	7	1.4
B (Accession	.88	96.0	78-9	17.1	ished.	8 6 days N 1 day NNW 3 days	12	1.3
DERRI TOWN IN SHAILABAD.	Culmination. 2 adays, 18 of June and 11 of July Incline.	.87	8ò.2	79-2	10-8	not furnished.	SW. SSW. NW. WNW 13 S. SE, SSE, KSE 6 W, S. E 6	56	2.0
ETRO ES	10 days, 4 of July and 6 of August	-47	85.2	77°C	7.0	Data	W, SSW 4 S, SE 5, E, ESH 3 ,,	15	1.2
TOWN IN ABAD.	Accession. 61 days of May and June Culmination. 62 days of July and August	·27	96 9 96 9	79.1	17.8	Date not furnished.	Calm 2 days 5 118'6 2 days 6 SE, ESE 39 ,, Calm 20 ,, Calm 1 day 6 S, SE, ESE 46 days 103'6	5	-08
ARRAH TOWN IN SHAHABAD.	Decline. 61 days of September and October	*15	89.4	73.1	16.8	Date not i	E. SE, ESE	23	*97

An examination of the tables submitted for each separate town does not enable me to absolutely lay down any law connecting rainfall with increase or otherwise of deaths and the periods of accession, culmination, and decline failing to correspond as to months there is 'necessarily variation in rainfall. The prevalence of east and south winds is very marked, even in April and May, when they are as a rule replaced by burning west winds, and the velocity is generally lower during the time when cholera was becoming epidemic. At the times of accession there is generally high temperature and wide daily range. During culmination the mean daily maximum is lower, the mean daily minimum higher, and consequently a smaller range of temperature, while during decline of mortality there is a further lowering of maximum temperature and a less range, except when the disease continued into October, when the advent of the cold season proved a 'disturbing element. The data for humidity are insufficient.



A cholera map of the Province of Bengal, illustrating its distribution during the year 1887, forms appendix No. II, Cholera prevalence as delineated by the cholera map. attached to this report. The map has been prepared according to the latest received instructions, and presents the death-ratio by registering circles instead of as in reports before 1886, by sub divisions. This is a cumbrous map with complicated illustrative statement, and both might without detriment be omitted from future reports, being replaced by the coloured map now introduced for the first time, and which faces this page. Much of the information afforded by the statement

referred to above will be found more conveniently in appendix VI. 36. There was very slight incidence of cholera at fairs or festivals during the year, the great majority escaping entirely. Most Cholcra at fairs. of the great fairs, as those in the Sarun, Dinajpur and Dacca districts, were free from the disease; but

at Ruffiganj mela in the Gya district in April the disease broke out, and the mortality was considerable. It appeared also at Tetulbaria in the Backergani district, and in consequence the fair was at once closed. At Gunga Sagur in the 24-Pergunnahs there were 11 cases and two deaths only, and three deaths at Kapilmory in Khulna district. At the gathering of opium cultivators in April at Motihari cholera showed itself first among people from the Nepal Terai, and afterwards broke out in the town. The want of proper shelter and arrangements for the large numbers who assemble were rendered more evident this year by rain occurring at the time. A few cases of cholera are reported from cooly depôts, but no outbreaks of importance—except 16 deaths in two cooly depôts at Ranigunj. Sanitary arrangements were made at all the fairs of importance, but in most cases were considered unnecessary.

37. Pilgrims are reported as generally exempt from cholera, except in

the Gya, Puri, Balasore, Cuttack and Midnapore districts. No less than 197 deaths from cholera Cholera among pilgrims. occurred in the lodging-houses in Gya and 171 during the Car festival at Puri, and there was considerable mortality in Puri on the various roads to Jagannath, and in the Midnapore district during the return from the Car festival in July. There is no accurate record, however, of mortality when the pilgrims are travelling, but the matter of their housing, feeding, and medical treatment has been attracting attention in the three Orissa districts, and good results will no doubt follow. In the Cuttack district it is proposed to place the proceeds of the Jagannath Road Fund at the disposal of the District Board for sanitary improvement along the Grand Trunk Road. In the Puri district, besides hospitals at Puri, Khurda, Pipli and Balianta, two temporary hospitals were placed at Satyabadi and Atharanala. In the Balasore district, 19 sweepers have been placed on the Grand Trunk Road under a Sanitary Inspector for cleaning rest-houses. Food and water-supply will also be looked to. This establishment will be paid from the Jagannath Road Fund. A pilgrim hospital is under construction at Chandbali, where such a large number of pilgrims arrive by steamers from Calcutta. During 1887, however, fewer came from the unfortunate accidents to the steamers Sir John Lawrence and Mahratta.

BENGAL.

Although cholera in 1887 over the whole province exceeded in severity the average of former years, only 59,717 deaths were recorded in Bengal proper in 1887, against 76,144 in 1886, and an average of 80,356 in the lustrum 1882—86. The ratio in 1887 is 1.70 per 1,000 of population, while 1886

Months.	Deaths.	Rainfall.	Months. De	aths. Rainfall.	one of 2.29. No less than 2,857
January		1.42	July	1,350 12.67	fewer villages were affected than
February		.07	August		in the year before. The marginal
March	6,170	4.04	September	477 8 ·68	
	. 14,819	1.69	October	609 3·61	table giving deaths and rainfall
	. 8,119	8-78	November	1,394 .87	presents no very unusual features,
June	. 1,853	18.56	December	4,060 0004	
				•	except that the aggregate of No-
. 1	4 T			0.0.7 0 .7	4 . f . d

vember and December is about a fifth of that of the same months in 1886. BURDWAN DIVISION.—There were 7,312 deaths recorded under Incidence of Cholers in the this head during the year. This, with the census Burdwan Division. population of 1881, 7,393,954, gives a death-rate of

0.98 per mille, but if the population be estimated as it may at 8,078,475, the The deaths in 1886 were 9,748 with a rate per 1,000 ratio would be 0.91. of 1.31 on the census population. Cholera was reported from every registering circle (96) in the division, and of the 31,449 villages 5.78 per cent. were affected, a decrease from the previous year of 1.20 per cent. decrease in the year 1887, in the death-rates of every district in comparison with those of the year before, and in every district in the division, except Midnapore, compared with the district rates of the five-year period 1882—86. The districts which suffered most severely were Howrah (1.95), Midnapore (1.55), and Hooghly and Scrampore (.91). In the Burdwan district there is (1.55), and Hooghly and Scrampore (.91). In the Burdwan district there is nothing recorded of any special interest concerning the disease. It prevailed most severely in the town and than of Burdwan, and after these areas in thanas Rayna, Katgram and Ranigunj. An outbreak in thana Khondghose attracted attention, and medical aid was given. The bad sanitary condition of the town of Ranigunj no doubt affords a favourable breeding-ground for cholera, owing to most unfortunate neglect of duty by the Municipal Com-This has been followed by most regretable results in the current year, cholera having appeared in the cooly depôts, whence it has been transmitted through Northern Bengal, and even, I believe, to Upper Assam, attended by much loss of life. In the Birbhum district only 368 deaths are recorded in the year, Suri town only returning one death—a marvellous result considering the insanitary state of the town, which before long will, I fear, be followed by its natural result. In the Bankura district most deaths occurred in July and August, but the disease was not epidemic. In Hughli and in July and August, but the disease was not epidemic. In Hughli and Serampore also it was not epidemic, but in Serampore town there was an outbreak ascribed to the use of bad water. The village of Rishra in Scrampore, so often mentioned in previous reports as specially affected, escaped in 1887, it is said, from having been supplied with good water. In the Midnapore district, cholera was present throughout the year, in every month, and not one of the registering circles escaped; still the total mortality was less than in 1886. Contai sub-division seems to have suffered the most, but smart outbreaks occurred in places—one in July in Midnapore town when 43 deaths were noted, of which the Civil Surgeon found only 25 registered. It was, he says, clearly due to importation by pilgrims, who suffered badly on their return journey from the Car festival at Puri. Among them 18 perished at Midnapore, 5 at Garbeta, 9 at Dantun, 5 at Belda, 6 at Naraingurh, 10 at Debra, besides many more at different halting places and on the roads. The Howrah district registered 160 fewer deaths from cholerathan in 1886, and the mortality was less in Howrah town.

40. PRESIDENCY DIVISION.—In the Presidency Division there

16,167 deaths from cholera, which yield from the census population of 1881 (7,771,693) a death rate of 2008, nor willow.

Incidence of Cholera in the Presidency Division. death-rate of 2.08 per mille. If the population, however, be more fairly estimated at 8,141,438, the rate would be 1.98. These figures compare favourably with 1886, or with the five-year period 1882-86. In each period only one district had a larger death-rate—Khulna in the former (.51) and 24-Pergunnahs in the latter (.11). Of the 127 registering circles in the Division, all except two, and of the 19,944 villages 15.11 per cent., were visited by the disease. The death-rate of the 24-Pergunnahs (3.56) is a high one, but this district may be looked upon as the great cholera centre of India, its numerous towns being in very bad sanitary condition. The Diamond Harbour sub-division suffered most. The Suburbs of Calcutta maintain with little diminution their sad pre-eminence of being annually scourged by cholera, the death rate being 8.31, against a mean ratio of 8.58 for the previous five years. Even favourable climatic conditions bring little relief to this horribly dirty town. The Nuddea district has escaped in the year under review with a much lighter affliction than in any of the pre-Nuddea in 1887... 1·66 Ditto 1882... 5·46 Dipto 1883... 4·69 Nuddea in 1884... 5.79 Ditto 1885... 4.25 Ditto 1886... 4.26 vious six years—vide marginal table.

41. RAJSHAHYE DIVISION.—The number of cholera deaths recorded in the Rajshahye Division were 7,576, giving a death-rate of '97 per mille of the census population of 1881—7,734,733. If the population be

estimated at 8,000,766, the rate will be reduced to '94. Of the 82 registering circles in the Division 5 escaped, but only 3.86 per cent. of 29,068 villages recorded deaths from cholera. In 1886 13,574 persons fell victims to cholera, or at the rate of 1.75 per 1,000 of census population, so that 1887 was a year of finor prevalence compared with the year before or with the quinqennium 1882-86. Julpaiguri (2.15) and Rangpur (1.89) were the two districts of the seven constituting the Division which suffered at all severoly. In the former a very severe outbreak occurred in April, May, and June in the teagardens in the Bhutan Duars, east of the Jaldakha river. It was investigated by the Deputy Sanitary Commissioner of the circle, and a report submitted to Government on the subject. The registration of deaths in the Duars has never been properly provided for, and the real loss of life attending this epidemic outbreak cannot be stated. In Rangpur cholera appeared in epidemic form in three localities—in the Nelphamari sub-division in the north, in the Ulipur Sub-division in the east of the district, and in Nisbetgunge than in which stands the civil head-quarters. The Civil Surgeon after inspection recommended remedial measures, of which digging of new wells—an inexpensive proceeding in the district—was one. The cause of these localised appearances of cholera is obscure, and was attributed in Ulipur to the Chilmari fair, but this the Magistrate thinks a mistake. The last two years have been the worst for Rangpur since the year 1878. In Pubna the disease was general, but active only in April, and in Dinajpur only one occurrence is noted—an outbreak among the coolies employed on the works of the Assam-Behar Railway.

42. DACCA DIVISION.—In the Dacca Division there were 23,822

Incidence of Cholera in the Dacca Division.

(8,700,939), of 2.73, against 23,975 deaths in 1886, with a death-rate of 2.75. So that there was little difference in mortality in the two years, but the rate for 1887 is higher than

difference in mortality in the two years, but the rate for 1887 is higher than that of the lustrum 1882-86 by 19. If the population be estimated at 9,650,167, the rate for the year under review would be 2.46 per 1,000. Of the 63 register-

DISTRICTS.	Percentages of villages uttacked in 1897.	Increase or de- crease as compar- ed with 1886.	Ratio of deaths per 1,000 of popula-	Increase or de- crease as com- pared with 1886.	Increase or de- crease as compar- ed with 1882-86.
Dacea Faridpore Backergunge Mymensingh	22·19 17·26 28·85 9·17	7:60 D 8:09 D 4:11 I 1:14 I	2·74 3·20 4·67 1·28	1 83 D 3 08 I 1 06 D	1.63 I 1.63 I 1.60 D

ing circles, deaths were reported from all and from 15.88 per cent. of the 29,109 villages in the Division. The death rates of the different districts and the total of the Division and percentages of villages attacked, compared with those of 1886 and the quinquennium 1882-86 are presented in the marginal table. Backerganj district

(4.67) suffered very severely, Faridpur and Dacca severely, and Mymensingh with much diminished intensity. April was the month of highest prevalence, and the November and December incidence of the disease was unusually mild.

Incidence of Cholera in the Chittagong Division.

Incidence of Cholera in the Chittagong Division.

Incidence of Cholera in the Chittagong Division.

Incidence of Cholera in the Chittagong Division.

Incidence of Cholera in the Chittagong Division.

It was 4,840, giving from the above enumeration a death-rate of 1.39. Estimating the population at 3,547,172, the rate would be 1.36. Although cholera did not generally prevail with marked severity, still the year under review records higher figures than 1886, when the deaths were 3,634—rate 1.04 per 1,000, an increase of .35. The rate was also higher than in the quinquennium 1882-86 by .04. Villages to the number of 1,010 afforded deaths in 1887, out of the 10,499 villages in the Division giving a percentage of affected of 9.61, an increase of .47 per cent. over 1886. All the 37 registering circles recorded deaths. The Tipperah district suffered most (1.95), the disease continuing prevalent from the year before. It caused most mortality in Noakhali in the month of April, but in both these districts, as in the Dacca Division, there was no winter exacerbation. In the Chittagong district, however, the conduct of the disease was different. It was very severe in the Cox's Bazar sub-division in April and May, continued throughout the rains, and had a winter rise in November and December.

BEHAR.

44. In this great Division of the Province there were 84,530 deaths from cholera in a population numbered in 1881 at 23,127,104. During the year before there were 25,709 deaths, and the average of the quinquennium 1882-86 is 41,415. The mortality in 1887 therefore greatly exceeded that of 1886, and was more than double the average of the five years stated. The death-rate per 1,000 of the above population was 3.65, against 1.11 in 1886 and 1.79 in the quinquennium 1882-86. Estimating the population for the progressive increase since 1881 at 25,433,975, the death-rate for 1887 would be 3.32 per 1,000. Cholera attacked 7,769 villages, against 3,254 in 1886, giving percentages of villages of 11.70 and 4.91 respectively, an increase of 6.79. Of the 149 registering circles, only one, in Monghyr, was reported as having given no cholora deaths.

The marginal table illustrates the incidence of the disease in 1887 in the

Incidence of Cholera in the East and West Be	har Divisions.
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	WEST BEHAR.							KAST BRUAR.						
Districts.	Percentage of villages attacked in 1987.	Increase or decrease as compared with 1886.	Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as compared with 1866,	Increase or derrease as compared with 1882—1886.	DISTRICTS.	Percentages of villages attached in 1987.	Increase or derrease as compared with 1687.	Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as compared with 1886.	Increase or decrease as compared with 1882— 1886.			
Patna Gya Shahabad Mozufferpore Durbhanga Sarun Chumparun	18:40 23:67 17:55 13:42 6:13 17:69 10:75	12:29 J 14:11 J 10:38 J 7:03 J 1:09 J 11:34 J 9:88 J	8:01 8:05 7:15 2:78 2:27 8:46 7:50	1.19 I 5.83 I 4.03 I 1.96 I 1.57 I 2.58 I 6.95 I	1°20 I 5°92 I 4°89 I °48 I °48 I 2°30 I 6°84 I	Monghyr Bhagalpore Purneah Maldah a Sonthal Pergunnahs Total a.	16.46 12.59 4.27 5.72 1.13	12.24 I 7.95 I 8.88 D 3.70 I 59 I	3:45 2:17 :85 1:07 :40	3.07 I 1.63 J .49 D .89 I .24 I	1'99·J -'38 J -'77 L 1'13 L -'91 L			

East and West Behar administrative Divisions, contrasting the percentages villages tacked with those of 1886 in the Divisions and in the districts which formthem, and the death-ratios with those of the year before

and of the lustrum 1882-86. It will be seen that in East Behar the death-rate (1·74) exceeded that of 1886 by 1·16 and of the quinquennium by ·13. In only one district did the mortality of 1886 exceed that of the year under review, but the five-year period has heavier mortality in three districts. In this Division Monghyr (3·45) and Bhagulpore (2·17) suffered severely. When we come to consider the figures of the Patna Division, however, it will be seen with what unusual severity the disease pressed upon the population, the death-rate (4·67) far surpassing that of 1886 and of the quinquennium 1882-86. Gya, Chumparun, and Shahabad exhibit ratios disclosing severe epidemic intensity. Cholera in these divisions was registered in every month of the year, Shahabad and Purneah showing considerable mortality in January for the cold season of Behar, but it began to increase rapidly in April, was worse in May, keeping a high level of mortality through June, July, and August, declining very considerably in September, and continuing with greatly diminished severity to the end of the year. This very startling and widespread epidemic attracted attention in April in the northern parts of Purneah, Bhagulpore, Monghyr, and Chumparun and in May, June, July, and August was epidemic throughout West Behar. In East Behar, the Sonthal Pergunnahs, I'urneah, and Maldah were least afflicted, though they did not escape from severe local outbreaks. I have before noticed that associated with the appearance of this epidemic peculiar atmospheric conditions were noticed by local observers, such as absence of the usual west winds, replaced by damp winds from the east, and a heavy downpour of rain in the end of May brought up by a cyclonic storm from the Bay of Bengal. I subjoin a few particulars concerning the prevalence of cholera in several of the districts.

A5. BHAGULPORE DIVISION.—The districts of this Division which Intidence of Cholera in the Bhagulpore Division.

Monghyr 345 of the disease in his district as beginning in the Bhagulpore 217 Maldah ... 1.07 of the Ganges, being worst in Gogri, Khatoria, and Bucktiarpur thanas, crossing the river to the south in July, affecting

the western thanas, and gradually working its way back to the south-east of the district. It reached its maximum in May. The three towns in the district had no exemption, Monghyr registering 122 deaths (rate 2·12), Jamalpur only 19 deaths (rate 1·40), but Shukpura 132 deaths (rate 10·54). In the Bhagulpore district there were about four times as many deaths in 1887 as in 1886, and an increase in all circles except the town of Bhagulpore, which generally suffers badly. The opening and extension of the water-works will no doubt lead to future greater exemption. In the Maldah and Purneah districts nothing worthy of note is recorded, but in the Sonthal Pergunnahs district cholera was very severe in the Sahebganj town, carrying off 12·04 per 1,000 of population, and in Deoghur 4·24 per 1,000 died, pilgrims from Benares falling victims among others.

46 PATNA DIVISION.—Cholera was epidemic in the Patna district, death-rate 3.01, one much in excess of the year before or of the preceding five-year period. It was parts in Siles there (7.72) Islampers (6.78) Discount in Siles there (7.72)

worst in Silao thana (7.72), Islampore (6.76), Dina-The Behar sub-division suffered much, and the disease attacked all the towns in the district, including Dinapore Cantonment and Khagoul. Gya district is pre-eminent in the Province for having yielded the highest cholera death-rate-8.05 per mille in the Province during the year under The disease was present throughout the year, but was most severe in May, June, July, and August. July being the month of maximum intensity, when 5,294 deaths were recorded. There were outbreaks of the disease in the town of Gya in March, April and July, and altogether 668 persons perished, or at the rate of 8.78 per 1,000 of population. Sanitary improvement is greatly needed here, but I am not sanguine that anything adequate will in the near future be carried out under the present system of municipal government. In the Shahabad district also there was a severe epidemic of cholera. It continued during every month of the year, December, however, only giving one fatal case. The behaviour of the disease was as in the Gya district, May, June, July, and August being the months of heaviest loss of life: July especially so, 6,132 people dying. All the towns in the district were affected. Local enquiries made by the Civil Surgeon point to insanitary conditions as orginating or causing the epidemic. He says:—"For all there is the same tale to relate: foul wells, foul tanks, human and animal ordure everywhere, damp houses, damp surroundings, and neglect of the first principles of sanitation." Altogether, 14,067 deaths are recorded, more than twice as many as in 1886, and there is no record of any epidemic of such severity before. In the Durbungha district cholera was less prevalent severity before. In the Durbungha district cholera was less prevalent than in any district of West Behar, but was more severe than any year since 1883, except 1885. The total mortality was 5,994, with a death-rate of 2.27 per 1,000 of population. June was the worst month with 1,510 deaths, but heavy rain in July and August—25½ inches—was followed by a decline of the disease as is generally the case in Lower Bengal. Of the total deaths, 3,504 occurred in the Madhubani sub-division, which seems very liable to cholera visitations. Medical aid was given. The town of Durbungha, described as "a low-lying, dirty, insanitary town, made up exclusively of ditches, tanks, and bunds, and periodically water-logged," had 253 deaths, a rate of 3.82 per mille. A scheme of drainage is under preparation. The district of Mozufferpore reports 7,186 deaths from cholera during the year, yielding a death-rate of 2.78 per 1,000 of population. Hajipur and the year, yielding a death-rate of 2.78 per 1,000 of population. Hajipur and Sitamurhi were the localities which suffered most, and the towns did not escape. Registration, however, is so imperfect in this district that it offers no useful comparison with others south of the Ganges, where registration receives better attention. In the Sarun district 7,894 deaths with a death-ratio of 3.46 were recorded. This is the heaviest death-roll of any year of which we have information. July and August were the worst months, but deaths were reported every month of the year, and the disease was very wide-spread. It was most virulent in Sewan, in the municipality and rural circle—the former having a death-rate of 5.63, and in Revelgunj town, where the people perished at the rate of 4.24 per mille. Chupra town escaped with a milder incidence of the disease. The great cholera outbreak in the Chumparun district, resulting in the loss of 12,929 lives, or at a rate of 7.50 per 1,000 of population, attracted attention at an unusually early part of the year, being prevalent in April and

severely epidemic during May, the worst month of the year, and June, with a sudden fall in July, and continued minor prevalence till complete disappearance in December. This course is a most unusual one, the months of heavy rainfall being those generally of greatest mortality. The places which suffered most were Motihari town 147 deaths—death-rate 14.26, Adapore thana 1,768 deaths—death-rate 1272, Bagaha thana 1,411 deaths—death-rate 1001, Hardi thana 1,816 deaths—death-rate 9.46 per mille. Bettiah town 125 deaths—death-During April and May, however, there was an assembly of opium cultivators in Motihari, often numbering as many as 10,000 at a time, among whom the disease appeared. This swells the death-rate inordinately, but the ratios given above for rural areas shows how severely the disease pressed upon the people. Thana Madhuban had only eight deaths, the only one which escaped epidemic prevalence. The Deputy Sanitary Commissioner of the Behar Circle visited the district, and under orders of Government so did I in escaped epidemic prevalence. the end of August, and my report on the subject was submitted to Government on 7th October 1887. This is the severest epidemic of which the history is known, and was preceded by two years of unusual rainfall, was associated with a very plentiful fruit crop, and with early rainfall and an absence of west winds. The insanitary conditions disclosed in the towns and villages, the bad and polluted water, imperfect drainage, and absence of village cleansing are mentioned in my report. The economic condition of many of the poorer classes contrasted unfavourably with that of districts in Lower Bengal, the people appearing to be both poorly fed and clad. Medical aid was given, but the people did not avail themselves much of the benefit of English drugs.

ORISSA.

47. The marginal table shows that cholera was more fatal in Orissa Incidence of Cholera in the Orissa Division. in 1887 than in the earlier periods

Death	s from c)	holera	Ratio popu	per 1.	of tr,—	Increase or de- crease as	Increase or decrease
1587.	1896,	1582-86.	1887	1886.	1882-86.	compared with 1886.	ed with 1882-86.
17,692	15,175	15,177	4.87	4.19	4.14	.co I	J 69.

in 1887 than in the earlier periods with which the year is contrasted. There were 17,692 deaths among a population of 3,628,832 according to the census of 1881. These give a death-rate of 4.87 per 1,000, a higher ratio than that of the districts of West Behar. If we estimate the population as 4,105,838, the rate

would be 4:30. Out of a total number of 20,763 villages, 3,683 were affected, or 17.74 per cent., against 3,651 and 17.83 per cent. in 1886. None of the 29 registering circles were free from the disease. A considerable incidence of the disease in the colder means assembles the usual course of events in Lower Bengal, but the high prevalence or June, July, and August assimilates to the state of matters found in Behar. July was the month of highest prevalence, corresponding to the influx of pilgrims to the Rajjathra festival at Jagannath.

Of the three districts making up the Orissa Division, Cuttack suffered the least, or at a rate of 2.60 per 1,000, a decrease in comparison with the year 1886 or the lustrum 1882-86. The thanas most affected were—Aul (571 deaths), Cuttack, rural (661), Dharamsala (600), Salipur (572), and Banki (505). Cuttack and Dharamsala were, according to the Civil Surgeon, influenced by the passage of pilgrims. Several sanitary improvements are proposed on the pilgrim routes. It is intended to extend the Puri Lodging-house Act along the main line of road, and to allot to the Sanitary Committee of the Local Board funds for conservancy at principal halting places. Funds bequeathed for rest houses will be used for local improvements, and specially for wells. Bodies will be removed from roads, and a cart placed at each chatti for removal of rubbish. The Puri district had a cholera mortality of 8,668 and a death-rate of 9.75, the highest in the Province. This rate, when contrasted with the periods marginally shown, illustrates how severe the

18	87.	18	86.	1882-86.			
Donths.	Ratio.	Deaths.	Ratio.	Denths.	Ratio.		
8,668	9'75	3, 813	4'29	3,433	3.86		

incidence of the disease was. The Khurda sub-division, as well as Puri, had epidemic prevalence. June and July were the worst months. Much attention was paid to curative and preventive

measures, and proposale similar to those of the Cuttack district are recommended

along the Grand Trunk Road. In the Balasore district there was more cholera than in 1886, but a decrease in comparison with the five-year period 1882-86. Bhudruck was the place at which it attracted most attention.

CHOTA NAGPORE.

48. Altogether 10,639 deaths from cholera are reported from this Incidence of Cholera in the Chota Nagpore Division.

Incidence of Cholera in the Chota Nagpore Division.

Incidence of Cholera in the tion of 4,334,178, of 2.45 per 1,000, against 1,340 deaths in 1886—rate · 30 per 1,000; or an average of 2,921 deaths in the 1882-86 quinquennium—rate · 67.

There are 24,761 villages and 851 afforded deaths, or at the rate of 3.43

Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba form cholera | Postba

Donth	s from c	holera		o per 1,0 pulation i		Increase or decrease as compar- ed with	Increase or decrease as compar- ed with 1882-86,		
1887.	1896.	1882-86.	1887.	1880.	1882-86.	1886.			
10,639	1,340	2,921	2-45	*30	*67	2·15 /	1.78 I		

in either of the periods given in the marginal table. Of the 62 registering circles, 52 were affected. June, July, August and September were the months of highest prevalence, August

exhibiting highest mortality. In only one district of the Division was the disease epidemic,—in Lohardugga, which had the high death-rate of 5.82. The relative severity of the disease in the four districts constituting the Chota

Districts.	Percentages of villages attacked in 1887.	Increase or decrease as com- pared with 1886.	Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as com- pared with 1886.	Increase or decrease as com- pared with 1882-8d.
Hazuribagh Lobardugga Singbhoom Manbhoom Total	1:50 8:36 1:03 :83 3:48	1:21 / 6:62 / :97 / :04 /	781 5-82 *27 *19	73 I 5:16 I 25 I 06 I 2:15 I	26 D 5:49 I :08 I :82 D

Nagpore Division is exhibited in the marginal table, and the only noticeable feature concorning cholera in Hazaribagh district was that, as in Lohar dugga, it was worse in the north-west of the district in places approaching the Gya and Shahabad districts, where, as

The thanas which suffered most before shown, it existed in epidemic form. in the Lohardugga district were: - Lohardugga, Daltongunj, Hosainabad, and Gurwa.

49. The facts connected with cholera among European seamen are disclosed in the table Cholera in the Port of Calcutta.

in the margin, and compare favourably any except 1885. No deaths are recorded

with

vear

sion hosp	mis- into pital	ani th num	nths ong ots ots obor	1,00 popu	n per n of lation	Av	erage i	trengt	h of se	amen i	in	Ratio per mille.					
1887.	1886.	1887.	1886.	1887.	1886.	1887.	1583.	1883.	1684.	1886.	386.	1887.	1583.	1883,	1884.	1885.	1856.
20	49	19	26	10.03	11.17	1,893	1,792	1,860	1,684	1,693	2,326	10.03	22.8	19.8	21.3	4.18	11.17

out of hospital from this cause. Among the Native floating population there were 49 deaths, against 59 in 1886, giving death-rates of 1.96 and 2.32 respectively of estimated population.

SMALL-POX.

The record of small-pox goes on contracting, year by year, with fair

							Percentages	NUMBER OF CIRCLES				
	PERIOD. Number of deaths.		Number of deaths.	Ratio per mille.	of villages attacked by	Affected more or less severely.	From which small-pox was absent.					
In	1887			•••	3,846	.02	-00	4	377			
	1486	•••	•••		4,049	*06	-97	8	359			
-	1885	•••	444	•••	9,863	*14	2.43	18	272			
	1884	•••	•••		18,533	*28	2'SN1	53	224			
	1883	•••	***	•••	9,714	*14	1 73	30	284			
"	1882	•••	•••	•••	13,651	-20	2.87	33	250			
•••	1881.	•••			24,371	*36	4.37	46	218			
••	1880	•••	•••	•••	22,953	*34	4.86	54	241			
••	1879			•••	22.843	34	4.08	77	171			
••	1478		***	***	12,410	18	3.09	30	206			
••	1877		•••	***	8,088	'12	2.04	22	255			
	Mea		he de	cade								
		187	7-86		14,647	-22	2'94	87	251			

steadiness, and 1887 exhibits the smallest mortality of any year set forth in the marginal table. A death-ratio per 1,000 of population of 05 and a percentage of villages attacked of 90 are subjects of congratulation, and evince the results following on the prosecution of vaccination in a systematic manner. Had the organisation and establishment I asked for

in 1880 been granted, I have no doubt that the disease would by this time have ceased to be a subject of anxiety throughout the Province. Even under present circumstances the ratios used in the illustrative map showing the incidence of small-pox in the Province, which faces this page, have had to be reckoned differently from those used in the other illustrative maps incorporated in this report, to enable me to show the disease by grades of colour. In the districts of the Patna Division, to only three of which has vaccination been extended, 47 per cent. of the mortality is recorded, and Chumparun alone gives 674 deaths; and the Orissa Division, in which vaccination is backward and inoculators active, affords 32 per cent. The Cuttack district had the highest number of deaths (682) of any in the Province—a fact little creditable to the vaccination establishment employed there. From the Chittagong district, to which vaccination has not yet been extended, and where inoculation is in abeyance, only one fatal case is recorded. The geographical position of this district, lying between forest-covered mountains and the sea, with a base abutting on fairly protected districts, has much to say to this remarkable immunity. No deaths from the following districts are reported during the year :-Bankura, Birbhum, Serampore, Jessore, Bogra, and Pubna. Many of the deaths reported as smallpox have on enquiry been found to be measles and fevers attended by anomalous cruptions.

The mortality from small pox in urban and rural circles is exhibited Mortality from Small-pox in the urban and rural circles.

CIRCLES.	DRATE	BATTO SEE			ith 1886.			
CIRCLES.	1887.	1886.	1877-8ß.	1887.	1886.	1877-86.	Increas crease pared w	Increase crease pared 1877-8
Urban circles Rural do,	3 31 3,513	204 8,845	1,513 18,134	·13 ·05	*08 *06	.65 .50	*05 <i>I</i>	'49 <i>D</i> '15 <i>D</i>

in the marginal table. Though the year can compare favourably with the ten-year period 1877-86 in urban circles, yet there was increased mortality in comparison with 1886. The higher death-rate in towns, compared with rural areas, can only be attributed to neglect

of vaccination and mefficient administration of the Compulsory Vaccination Act. Bettiah and Gya stand out prominently in the list of towns as having numerous deaths from this cause.

Localities of severe prevalence

52. The localities where small-pox was severe during 1887 are given below:

Towns.		Ratio per mille.	RUBAL CIRCLES.	Ratio per mille.
Bettiah in Chumparun	•••	3·19	Kurseong in Darjeeling	1·37
Sewan in Sarun		1·42	Kendrapara in Cuttack	1·03

The facts about Kurseong, nowever, I know to be otherwise than represented; the deaths may have been from measles, but were not from small-pox.

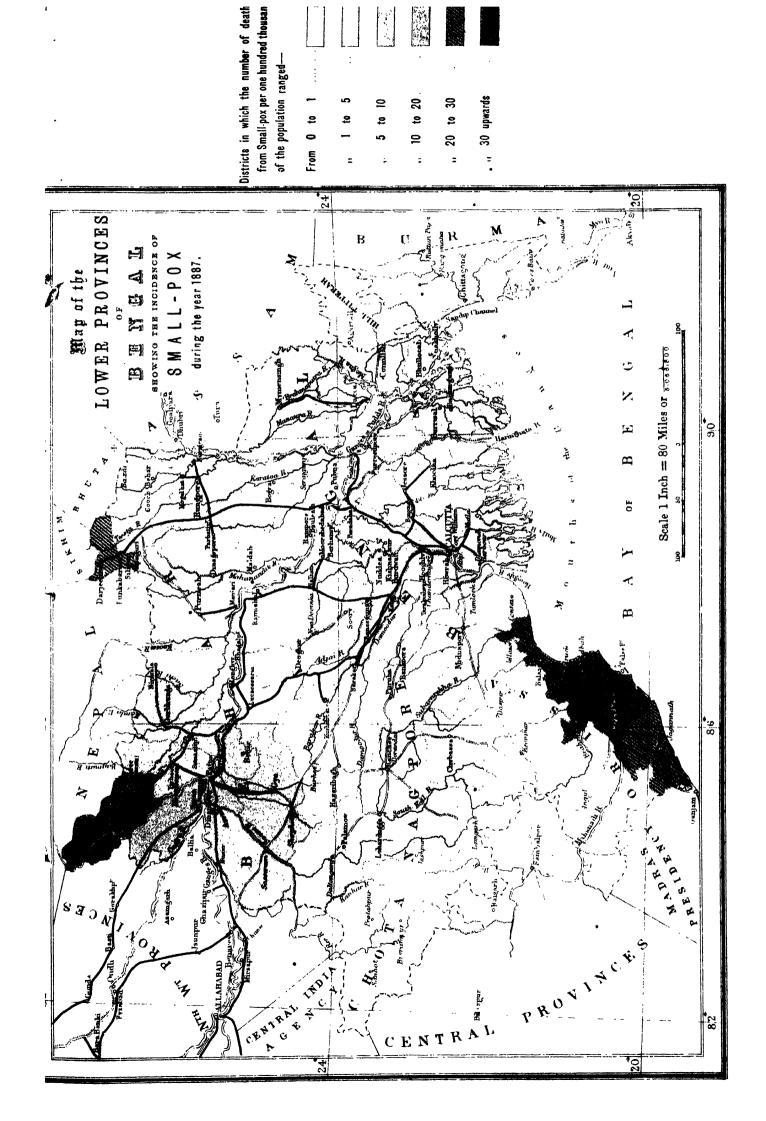
53. The seasonal fatality of the disease is given below, and followed its usual course, the hot months from March to June Seasonal fatality from Small-pox. having 2,215 deaths, against 1,631 in the remaining eight months. As long as inoculation is practised, this apparent law of prevalence will hold good.

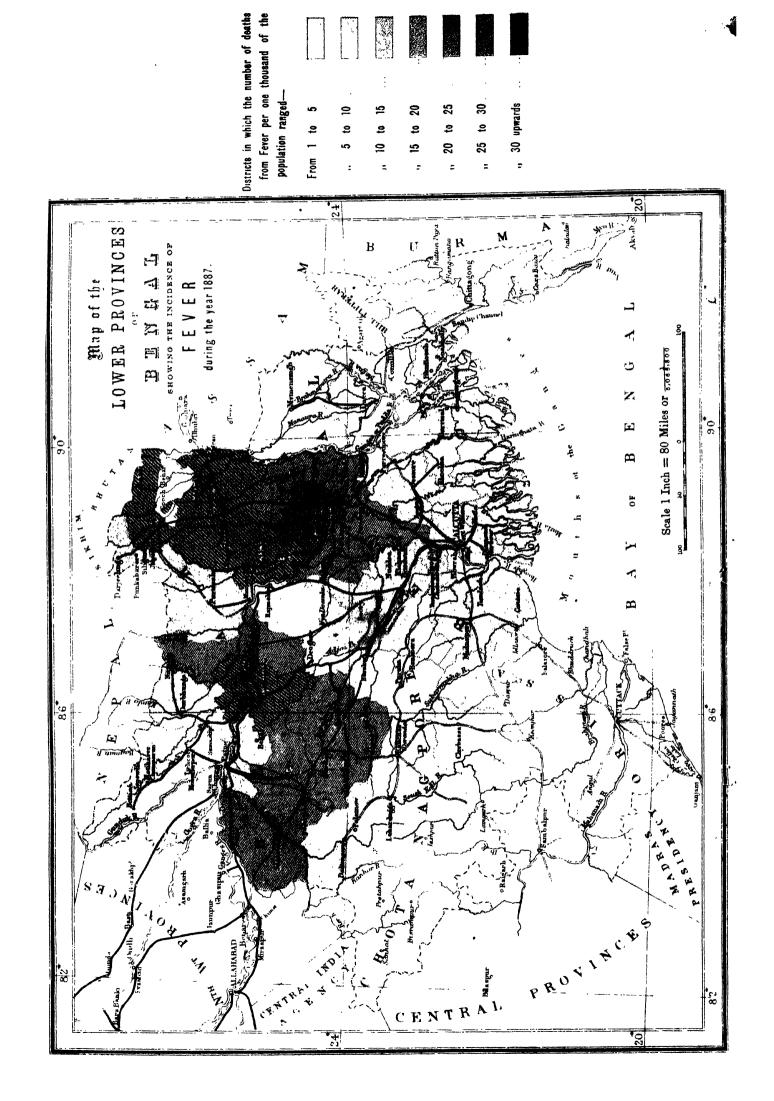
Mo	ntiis.		Deaths.	Hatio per mille.	Montus.		Deaths.		Batio per mille.
January			269	.004	July	···	285		·004
February			356	.005	August		185		-002
March	•••	•••	507	°007 .	September		92	•	1001
A pril	•••	••	621	.009	October	•••	83		.001
May			67:2	•01	November	•••	142		.002
June			415	-006	December		2.9		.003

Mortality from Small-pox among

infants and childr		Proportion per cent. to total mortality.
Under 1 year	752	19.55
1 to 6 years	1,547	40.22
6 to 12 years	500	13 00
Total under 12 years.	2,700	72:77
_		

The mortality from small-pox among infants and children is mar-The rates at the different ginally exhibited. ages vary slightly from those of last year, but the total ratio (72.77) is less than that of 1886 by 1.10. Considering the customs of the people with regard to protecting their children from small-pox, and the difficulties arising from the zenana system, improvement under this head may be expected to come about more slowly than in the general deathrate from the disease.





In the Port of Calcutta one case of small-pox was admitted into hospital from the European seamen, and death did not Incidence of Small-pox in the Port of Calcutta. result. No deaths were reported among the Native floating population, but two foreign steamers, bringing pilgrims from Jeddah, arrived with small-pox on board—two cases in one steamer and nine in the other. No outbreak of the disease followed in the dispersal of the pilgrims in Calcutta, but I have heard of two in the mofussil.

FEVER.

The statistics of fever fatality and prevalence for the year 1887 will 56.

Prevalence and fatality of Fever.

Period.	Number of deaths.	Ratio per mille of popula- tion.	Number of villages affect-	CIRCLES	. NUMBE	ROP
In the year 1887	1,097,768	16:44	149,916	86	169	4 10
Ditto 1886		15:97	149,905	24	150	471
Ditto 1885		15'75	147,675	24	154	469
Ditto 1884		14 60	147,466	29	116	504
Ditto 1883		13.81	142.731	27	130	491
Difto 1882		14.06	134,512	58	109	477
Ditto 1881		14.23	141,976	218	167	289
Ditto 1880	43.3.3 .3.44.5	10:43	129,045	124	112	437
Ditto 1879		9:41 11:23	118,970 128,810	135	105	349
Ditto 1878 .	7 12,887	10.75	111,925	135	113	416
Ditto 1877	711,C37	10 70	111,020	1.50	113	910
Mean of the decade 1877-86	801,608	13.02	134,784	86	130	442

be found contrasted with those of the previous decade in the marginal table. The number of deaths, and consequent ratio to population, continues to rise; and judging by the figures presented, the year under review would be classed as a very unhealthy one. This, however, can hardly be considered the case, except in a few localities, for the general view of the Magistrates and Civil Surgeons is in favour of an opposite opinion. It will be seen that, in regard to special virulence in circles, fever prevailed more than, in the preceding four years, but the

fall is great since the epidemic times included in the years 1880-82. believe the increase in mortality may be generally attributed to advancing registration in many districts; and should the subject only obtain the attention it merits, a further advance may be anticipated. It is to be understood that under this heading are included nearly all diseases attended by a rise of temperature. The shaded map facing this page illustrates fever fatality during 1887.

Comparative mortality from Fever in the urban and rural circles.

Increase or detrens as compared with 1886.
Increase or decrease as compared with 1877-56. RATIO PER 1,000 OF E DEATHS FROM FRVER CIRCLES. 1887. 36,821 825,287 10'45 12'20 15'07 16'06 16'11 12'94

The marginal table presents the facts for similar periods of fever mortality in towns and rural areas, from which it will be learned that fever is gradually declining in the former and increasing in the latter. To .obviate mistake, however, I would point out that this marked decline of fatality in towns is coincident with making over the charge of registration to municipal bodies,

who have often sadly neglected this most important and necessary part of their duties. I believe in no such remarkable change in the incidence of fever The deaths in rural circles go on increasin municipalities as is represented. ing with improved registration.

The seasonal incidence of fever for the whole Province, and the rainfall

Seasonal incidence of Fever in the Province.

							==
Months.	Deaths 111 1887.	Ratio per mille	Rainfall in 1887.	Montlis.	Deaths 111 1887.	Ratio per mille.	Rainfall in 1887.
January February March April May Juno	105,105 74,363 75,366 83,283 85,150 69,851	1.58 1.15 1.13 1.25 1.28 1.05	1 '50 - '04 2 '63 1 '27e 8 49 11 '12	July August September October November December	80,808 91,403 92,826 107,379 119,031 113,204	1,22 1,38 1,25 1,62 1,79 1,71	11'50 11'50 7'98 8'51 '56 '0002

in 1887 are marginally shown. The course of events was normal, the bulk of the figures obscuring the differences which are 'usual several geothe graphical divisions of the Province. January usual hasa heavy

mortality, followed by a marked diminution during February and March, a rise in April and May, another fall in June, followed by a rise in July and August, an anomalous drop in September, succeeded by the three months of the last quarter, which are always the worst. Deaths in September may have been influenced by the early diminution of the rains in some districts.

59. The marginal table presents the districts in which the fever mortality

	Distric	ts in v	which Fever	prevailed most s	everely	·•	
Districts.			Ratio per	Districts.			Ratio per mille.
Rajshahye			30 73	Nuddea	•••		21.99
Dinagepore		٠	29.87	Bhagulpore			21.56
Julpaiguri			28 98	Hazaribagh		•••	21:35
Maldah			26 95	Shahabad	•••		20.62
Monghyr			25.94	Gyn			20.31
Rangpur			25.90	Birbhoom			19.75
Bogra	• • •		24.94	Purneah	•••		19 10
Pubm		•••	23.82	Darpling		•••	19.07
Murshedahad			23.72	•			

was greatest. The first four are districts in Northern Bengal, the fifth is Monghyr, taking this position from exceptional causes, while following it are three more districts in Northern Bengal. This establishes to my mind that

in some parts of the country registration of deaths is beginning to hold some relation to actual facts, as from intimate knowledge I look upon the first eight districts in the list, except Monghyr, as some of the most feverish in the Province. When events come to be truly recorded, I think it will be found that the districts comprised in the great triangle lying between the Gunduck and the Ganges on the south, the Berhampooter on the east, and the Himalayas on the north, will be the area specially afflicted by severe malarious fever. To elucidate this, however, the civil authorities in Behar must give proper attention to mortuary registration.

60. A few facts concerning the incidence of fever in Bengal, Behar and General history of Fever in the Divisions of the Province and in districts.

Orissa, and in the administrative divisions are subjoined.

BENGAL.

61. In a population estimated in 1881 at 35,073,770, 627,958 deaths from Mortality from, and seasonal fever were recorded, giving a ratio per 1,000 of incidence of Fever in the Bengal 17:90, against 17:15 in 1886 and 16:74 in the Proper Division of the Province. quinquennium 1882-86—a progressive rise in mortality. The number of villages from which mortality was returned was 81,997, or

Months.	Number of deaths in 1887.	Ba nnfa:1 in 1857.	Mean deaths during decade 1-77-	Average minfull of preceding rears.	Montus.	Number of deaths in 1857.	Rainfall in 1887.	Mean deaths dur- ing decade 1877- 86.	Average rainfall of preceding years.	
January kebruary March April May June	67,787 46,985 46,717 50,299 47,245 36,367	1122 107 4104 1169 8178 13156	50,015 38,569 39,336 38,768 54,779 99,834	140 198 1170 2171 7133 14184	August September October November December	 89,346 14,250 41,409 62,200 72,039 73,364	12:67 12:06 8:68 3:01 -87 -00:04	31,426 35,596 39,402 48,624 65,208 69,847	14°82 14°80 11°28 4°73 *47 *29	

a percentage of 68 29, against one of 69 80 in 1886—a diminution of 1 51. The seasonal fatality, month by month is marginally shown with rainfall for 1887, and average of previous years. The sud-

den rise in April is unusual, and may perhaps be owing to the peculiar climatic conditions mentioned in the previous section of this report, and the fall in September may have followed the scantier rainfall of the South-West mousoon period. From May to September was the healthiest part of the year, the last quarter, the time of drying up of moisture and increasing cold, being the worst.

62. BURDWAN DIVISION.—The population of this Division was reckoned in 1881 at 7,393,954. In 1887, 109,797 persons are returned as having died from fever, giving a ratio per mille of 14.84, against 102,188 and ratio of 13.82 in 1886, and 120,297, or 16.26, in the lustrum 1882-86. The disease, therefore, was more fatal than the year before, but considerably less than in the other period with which comparison is made. After the cessation of the great epidemic fever, it is estimated that if the people increased in numbers at similar rates as in the province generally, the population at the end of the year under review should stand at 8,078,475 and the fever death-rate at 13.59. The marginal table represents the facts relating to fever in the several districts constituting the Burdwan Division. With an increase of mortality of

DISTRICTS.	Percentages of villages attacked in 1987.	Increase or decrease as compared with 1884.	Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as compared with 1885.	Increase or decrease as compared with 1852-56,
Burdwan	61:48 77:84 66:39 84:48 73:16	7:74 I 5:03 D 4:43 D 1:68 I 2:18 D 1:98 I	15:87 12:00 19:75 15:84 - 13:81 9:92	28 I 63 D 5:12 I 1:29 I '07 D '96 I	5 11 D 4 33 D 31 D 85 I 1 19 D 1 30 I

1.02 per 1,000 over 1886, there was a decrease in villages affected in comparison with that year and the quinquennium 1882-86. Midnapore in 1887 exceeds both in mortality and in number of villages attacked when compared with both periods. In relation to healthings the districts stand in the following order:—Birbhum 19.75, Midnapore 15.84,

Burdwan 15:37, Hughly and Scrampore 13:81, Bankura 12:00, and Howrah 9.92 per 1,000 of population. The Howrah ratio is obviously wrong, and the continued inattention to registration in this district cannot escape observation. The matter should have been carefully scrutinized by the vaccination officers of the circle, but this has not been done although they have had ample leisure and opportunity to do so. Even in a year of undue prevalence and mortality from fever, according to the Civil Surgeon fewer deaths are registered than in I have prepared the table below to show the death-rates from fever for the last six years, taking 1882 as the last one of the epidemic fever:-

	RATIO OF DEATHS PER 1,000 OF POPULATION.									
	Perions.			• Burdwan,	Bankura.	Beerbhoom.	Midnapore.	Hughly, including Seram-	Howrah,	
n 1887		••		15.37	12.00	19:75	15:84	13:81	9:92	
n 1880	•	••		15 09	12.63	14.63	. 14 55 *	13 88	8:96	
. 1885	•	••	}	17:78	12.35	16.25	14 53	15:74	10 01	
,, 1884]	18 81	13.56	19.53	14:79	14:02	8:39	
, 1883				23:35	1671	22.27	15:31	14:34	8:42	
$\frac{1}{1}$		••		28.86	26.40	27.62	15.73	17 08	7.29	

It will at once be observed how deaths from this cause have diminished in Burdwan, Bankura, and Birbhum; Midnapore, Hughli including Scrampore and Howrah on the contrary exhibit minor variation. In the district, however, the year under review was one associated with much suffering from fever. In the last quarter of the year it was very bad in Kulna town, and the dispensary attendance of the district rose, though the jail enjoyed excellent health, from diminished population and good water-supply. From district reports I gather that in Birbhum there was greater prevalence, chiefly in the south-east of the district, in Hughli and Howrah also, and in Midnapore a greater number of deaths, especially in the south of the district in the Contai sub division.

PRESIDENCY DIVISION.—In this Division 147,694 persons died of fever, or at the rate of 19:00 per 1,000 of a census Incidence of Fever in the Presipopulation of 7,771,693. In 1886 a smaller numdency Division. ber (135,800) perished from fever, or at the rate of 17.47 per 1,000, but these totals and rates are less than the average number

of the quinquennium 1882-86-159,075-with a rate of 20.46.

r decrease as with 182-56. per 1,040 in 1887. Percentages of villages attacked in 1887. f decrease r decrease with 1596. Batio of desths p of population in DISTRICTS. Increase or compared w Increase or compared v Increase or compared M-Pergunualis Nuddea ... Jessore ... Murehedabad Chulua ... 1.51/ 11.92/D 2.03/ 1.75/D 6.58/D 80'03 81'89 88'65 86'05 80'72 2:76*Î* :73*Î* :55*Î* 1:89 T 6:85 D 5:39*1* 2.53 I 54 D

1751

19.00

1.237

1:46/

2·23 I)

83.20

Total

Estimating the population at 8,141,438, the fever deaths for the year would be 18:14 per 1,000. No less than 16,672 villages, or 83.59 per cent., reported deaths in 1887, against 85.82 per cent. the year before. The marginal table presents with regard to each district in the Division a comparison of the percentage of villages attacked between 188 and 1886, and of the death-rates in the year under review with those in 1886 and the fiveperiod 1882-86. Murshedabad holds the first place with regard to ratio of mortality 23.72, standing before

Nuddea 21.99, which is no longer so seriously afflicted as in former years; Khulna comes next with 17.54, Jessore 17.48, and 24-Pergunnahs 15.67 per mille. Fever was more fatal in three districts of the Presidency Division than during the year before, and was very prevalent in the last quarter of the year in

		Ratio per	İ		Ratio pe	r
In 1887	•	15.67	In 1882	•••	mille. 15:63	
2000			,, 1881		16.60	
,, 188 6	•••	12.91	بر 1880 بر	•••	14.09	
,, 1885 ,, 1884	•••	14·25 14·16	,, 1879	•••	13 60	
,, 1883	•••	14.70	, 1878 , 1877	***	17·40 15·79	•
77	••••		, ,,,	•••	-0.0	

within narrow limits in this district. Th

				R	stio of death	s
					per mille.	
In	1887		•••		21.99	
,,	1886	•••			21.26	
,,	1885		•	•••	26.85	
"	1884	•••		•••	29.22	
,,	1883	•••	•••	•••	27.60	
•••	1882	•••		•••	30 50	
,,	1881	•	•••		35·5·1	
,,	1880	•••	'	•••	2 9 98	
.,	1879	•••	•••	•••	15.66	
,,	1878	•••		•••	18:21	
.,	1877	•••	• •••	•••	17.90	

Moorshedabad, which returned a high mortality. I give a marginal table for the 24-Pergunnahs, comparing the 1887 death-ratio with those of the preceding decade, from which, if the statistics are at all trustworthy, we learn that the fever mortality varies

The table contrasts with the one also marginally given for the Nuddea district, which represents the fevor mortality as having largely diminished within the last two years. I am not, however, satisfied that defects in registration have not had an influence over such a rapid change. Satkira sub-division is described as the worst part of the Khulna district, and here the fever is peculiarly localised, depending, it is sup-

posed, on the influence of extensive swamps now in process of filling up. The

question of their reclamation is one well worth considering.

64. RAJSHAHYE DIVISION.—The census population of this Division in 1881 was 7,734,733, and the number of fever deaths recorded in 1887 were 210,147, yielding a death-ratio of 27·16 per 1,000, a very high figure. The mortality in 1886 was 199,649, ratio 25·81, and the average of

figure. The mortality in 1886 was 199,649, ratio 25.81, and the average of the lustrum 1882-86, 162,887, ratio 21.05; so that in the year under consideration we have a rise in ratio of 1.35 over the year before and of 6.11 over that of the five-year period. This great increase, however, need not be supposed to be real, as I have no facts in my possession indicating that the Division has become at all more unhealthy than formerly. Only now we are beginning to be supplied with a record of mortality approximating the truth and establishing on a basis of figures the very evil reputation of the districts making up the Division. Estimating the population at 8,000,766, the death-rate would be 26.26. Deaths were recorded from 22,472 villages, or 77.30 per cent., against 21,373, or 73.56 per cent. in 1886, or an increase of 3.74 per cent. The marginal table illustrates the facts concerning fever mortality in the different districts of the Division,

Districts.	Percentages of villages attacked in 1887.	Increase or de- crease as com- pared with 1886,	Ratio of deaths per 1,000 of popu- lation in 1897.	Pherease or de- curisse as com- pared with 1896.	Increase or de- crease as com- pared with 1882-86.
Dinajpur Rajshahyo Rangpur Rangpur Rogra Pubus Darjibing Julpanguri Total	88:71 89:05 62:72 68:03 80:19 50:98 87:92 77:30	1:29/ 5:47/ 2:17/D 4:43/ 13:65/ 17:16/ 1:98/D	20:87 30:73 25:90 24:44 23:42 19:07 28:98	5:95/ 5:87/ 1:22/0 2:73/ 5:86/0 2:72/ 2:03/0	11.727 4.001 7.087 4.267 -417 9.727 8.917 6.111

different districts of the Division, comparing the percentages of villages affording deaths in 1887 with those in 1886, and the death-ratios of 1887 with those of 1886 and of the lustrum preceding the year under review. In 1887 there are enhanced death-ratios in five districts and diminished ratios in three districts, comparing them with those of 1886; but with regard to the lustrum, there is a decrease only in the Pubna district,

parts of which, however, suffered severely, as Raigunj Rural, with a death-rate of 29.66, Chatmohur 28.63, Dulai 26.94, and Serajgunj Rural, 24.26 per 1,000. This year Rajshahye district displaces Jalpaiguri from the top of the list of most afflicted districts with a death-rate of 30.73 per 1,000. For easy reference I give

•		Ratio per mille in 1887.	Difference in mortant; as compared with 1886.
Rajshahye	•••	30.73	5·87 I.
Dinajpur	•••	29.87	5.95 <i>I</i>
Jalpaiguri P	•••	28.98	2·03 <i>D</i>
Rangpur	• • •	25.90	1 22 D
Bogra Pubna	•••	24.94	2·73 <i>I</i>
	••	23.82	3.86 <i>D</i>
Darjiling		19.07	1

a statement in the margin to show how severely these Sub-Himalayan districts suffer. The Civil Surgeons of Rangpur and Dinajpur both mention cases of typho-malarial fever as having come under observation, as well as the ordinary intermittent and remittent fevers so common in their districts. There were inundations in Rajshahye, Pubna, and Dinajpur, and in the last they were supposed to have

favoured fever prevalence. In Rajshahye the inundated tracts are said to have suffered equally with others, and in Pubna the effects were not ascertained. As a rule a Ganges flood is followed by good results to health.

DACCA DIVISION.—Only 13,467 villages of this Division, or 46.26 per cent., returned deaths from fever, against Incidence of Fever in the Dacca 15,513 villages, or 54·10 per cent., or a decrease of 7.84 per cent. in 1887. The disease was therefore 7.84 per cent. in 1887.

less fatal and less diffused than in the previous year. The deaths reported numbered 114,370, or at the rate of 13·14 per mille of a census population of 8,700,939, in opposition to 119,170, rate 13·69 in 1886, or 102,868, rate 11·82 per 1,000 in the quinquennium 1882-86. If the population be estimated at the end of the year at 9,650,167, the death-rate would be 11:85 per 1,000. The

districts stand with regard to mortality in the same Ratio per order as last year as marginally shown. If registration were reliable, I am by no means sure that 17:63 13:18 Backerganj the order and ratios would not be found consider-Mymensingh In Faridpur especially registration 9.86 ably changed. Faridpur

is remarkably and inexcusably defective.

Districts.	Percentages of vil. lages attacked in 1867.	Increase or decrease as compared with 1856.	Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as compared with 1886.	Increase or decrease as compared with 1832-86.
Dacea Faridpur Backergunj Mymensuigh Total	83:69 53:55 65:33 23:75 46:26	13:21 // 12:86 // 12:48 // 7:84 //	. 1318 9:86 17:62 12:07	1.06 <i>D</i> 1.86 <i>D</i> .84 <i>I</i> .36 <i>D</i>	1:32 <i>I</i>

The facts concerning the disease in the different districts are shown in the marginal table, which I fear, however, discloses a very incorrect record of events, and therefore need not be considered at length. Civil Surgeon of Dacca The notes the presence of a pernicious remittent fever, and the Civil Medical Officer of Faridpur states that seven cases of typhoid fever came under his observation in the headquarters town.

CHITTAGONG DIVISION.—In this Division, with a census population of 3,472,451, 45,950 persons died of fever, or Incidence of Fever in the Chittaat the rate of 13.23 per 1,000, against 44,911, rate 12.93 in 1886, or 42,228, or 12.16 in the lustrum 1882-86. A slight progressive increase of mortality is thus indicated, but in 1887 a smaller number of villages reported deaths 6,924, or 65.94 per cent., in comparison with 7,136, or 68.14 per cent., in the year before, a decrease of 2.21 per cent. The disease may

Incidence of Fever in the Chittagong Division in 1887.

Districts.	Percentages of villages attack- ed in 1947.	Increase or de- crease as com- 12 red with 1585.	Ratio of deaths per 1,000 of po- pulation in 1887.	Increase or de- crease as com- pared with 1885.	Increase or de- crease as com- pared with
Chittagong Noukholly Tripperah	65°94	2:69 D 2:86 D 1:86 D 2:21 D	11:00 17:41 12:63 18:23	*18 <i>D</i> *62 <i>I</i> *48 <i>I</i> *30 <i>I</i>	1.99 <i>I</i> 1.69 <i>I</i> 1.07 <i>I</i>

therefore be said to have been more fatal, but less general in the year under review, a very doubtful statement. The marginal statement, however, shows a decrease in villages attacked in all the districts, but an increase in mortality in two out of three. In order of mortality they stand as follows:-Noakhali 17.41, Tipperah 12.63, Chittagong 11.00 per 1,000. The reports of the Civil Surgeons, however, tend to discredit this, as fever was very

prevalent in the Tipperah district, beginning in July, it is said, on account of scanty rainfall, when only 7.76 inches fell, against an average of 3 years of 18.68 inches. It was so severe that no less than five Hospital Assistants were deputed to treat cases, many of which were of a remittent character towards the hills. If the population of this Division is estimated at 3,547,172, the death-rate for 1887 would be 12.95.

BEHAR.

The population of Behar in 1881 was numbered 23,127,104, and in the year under review fever was the death cause of 366,857, or at the rate of 15.86 per 1,000. In Mortality from and seasonal incidence of Fever in the Behar Division of the Province. 1886, 370,740 deaths were reported, or a rate of

1603 against 315,434 deaths, rate 13.63 in the five-year period 1882-86. From 42,480 villages deaths were recorded, or 64.02 per cent., in contrast with 42,652 villages, or 64.44 per cent., in 1886. In 1887; therefore, there was smaller mortality distributed over a less number of villages than in 1886, and a distinctly greater death-rate excelling that of the lustrum by 2:23 per 1,000.

In the marginal table are exhibited the deaths in every month of the

		~.							
Months.	Deaths in 1887.	Rainfull in 1887.	Average deaths during decade 1872-36.	Normal ramfall of several years.	Lonths.	Deaths in 1887.	Rainfall in 1887.	Average deaths during decade 1877-86.	Normal rainfail of several years.
January February March April May June	29,763 21,242 21,822 25,765 30,521 27,392	1'88 . Nel. '79 '77 8'45 8'83	18,360 15,600 17,753 19,737 11,179 19,422	*52 *51 *40 *58 2*65 8*01	July August September October November December	33,735 38,071 82,7%5 86,410 38,053 31,358	8:60 10:54 7:09 5:85 Nil Nil	20,307 24,005 24,905 28,500 31,464 26,764	12'28 11'47 9'07 2'45 '14 '17

year 1887, the rainfall by the month, average fever deaths of the decade 1877-86, and the average rainfall month by

As usual the heaviest loss of life occurs in the last quarter of the year, but in contrast with Lower Bengul mortality increases more rapidly during the rains, and August of 1887 was characterized by an abnormal number of deaths, which may have followed irregular rainfall in May and slight fall in July. reasons for the differences between Behar and Lower Bengal have been explained in previous reports. The proper health status of Behar with regard to fever will remain a matter of obscurity until we can obtain correct figures from Durbungha, Mozufferpore, and Chumparun districts.

Incidence of Fever in the Bhage pore (East Behar) Division in 1887.

BHAGULPORE (EAST BEHAR) DIVISION.—The deaths recorded were 169,407, giving a death-ratio per 1,000 from a census population of 8,063,160 of 2i.01; while in 1886 there were 151,321 deaths, rate 18:76, and

in the lustrum 1882-86, 128,410 deaths, rate 15.92. Casualties are reported from 18,904 villages—75.27 per cent. against 17,237, or 68.03 per cent. the year before. In contrast with both periods, however, the year 1887 may be said to show increase and extension of fatal results. If the population of the division be estimated at 8,704,694, the death-rate of the year would be 19:46 The districts are arranged marginally according to the severity per mille.

Ratio per mille. Maldah 26.95 25.94 Bhagulpore 21.56 19.10 Southal Pergunnahs 13.66

of the disease Maldah, this year takes precedence of all, and displaces Monghyr which last year headed the list. The rates show an increase in every district, but Purneah by no means occupies its proper position, as in it fever was widespread and of a bad type, affecting European resi-

of moderate intensity. All the reports, however, show dents who escape in yer that there was greater prevaience and fatality from fever in these districts than

Districts.	Percentuze of villages, attacked in	Increase or derruser as compared with 1826.	Batio of deaths per, 1,90% of p position in 1887.	Increase or decrease us cos. pared with in 1886.	Increuse or decrease as compared with 188256,
Monghyr	79°81 84 57 99°53 83 74 59°48	7:13/ 7:13/ 3:70/ 14:62/ 8:83/	25:94 21:56 19:10 26:95 13:66	1:87/ :18/ :40/ 12:59/ 2:29/	9:55 / 8:96 / 1:77 / 10:53 / 2:32 /
Total	75.27	7"9+2	21.01	2 25/	\$.081

for some time. There were inundations from the Ganges and Kosi in Bhagulpore and Purneah, from the Ganges in Monghyr, and from the Mahanunda in Maldah. in Monghyr is increased fever ascribed to this cause. The facts concerning the diffusion and fatality of fever in the several districts of the division are contrasted in the marginal table with those of 1886 and of the fatality with the lustrum 1883-86.

PATNA OR WEST BEHAR DIVISION .- In 1881 the population of the Division was given at 15,063,944, but if now may be estimated at 16,729,281. The Incidence of Fever in the Patna (West Behar) Division in 1887. recorded deaths in the year are 197,450, which gives a death rate of 13:10 per 1,000 of the former population and of 11 80 of the latter. In 1886 there were 219,419 deaths, rate 14:56; and in the lustrum an average of 187,024 deaths, rate 12:41 per 1,000 of census population. There is thus a decrease in ratio of 1.46 in comparison with the year before, and an increase over

Distric	TS.	•	Ratio of deaths per mille in 1897.	Difference in mertality 58 compared with 1886.	Difference in percent- age. of villages as compared with 1886.	
Shahabad Gya Patna Chumparun Durbhanga Sarun Mozufferporo			20:62 20:31 15:24 13:41 10:56 7:50 7:23	8 58 D 1'24 I '27 I 1'52 D '40 I '77 D 1'89 D	9 10 D 4°32 D 7°53 D 7°62 D 1°57 D 9°11 D 8°33 J	

records of which, however, are by no means reliable.

DISTRICTS.	Percentages of villages attacked in 1887.	Increase or de- crevse as com- pared with 18%.	Ratio of deaths per 1.000 of popula-	Increase or de- crease as com- pared with 1886.	Increase or de- crease as com- pared with 1822- 86.
Patina Gya Shuhabad Mozufferporo Durbibanga Sarun Chumparun Totaf	64°52 75°37 85°54 81°22 32°97 39°77 31°98	7:58 7) 4:82 7) 9:10 7) 3:33 7 1:57 7) 9:11 7) 7:02 7)	15°28 20°31 20°62 7°23 10°56 7°59 13°41	124 <i>I</i> 124 <i>I</i> 8 58 <i>B</i> 189 <i>B</i> 177 <i>B</i> 152 <i>B</i>	10D 2:39I 3:26I 2:19D -40I -25I 1:32I

the lustrum rate of .69. Fewer villages, 23,576, or 57.16 per cent., afforded fatal results in opposition to 25 415, or 62.21 per cent. in 1886—a decrease of 5.05 per cent. The marginal table contrasts the ratios of 1887 with those of 1886 for every district in the Division, and presents a diminution in four districts, a remarkable one of 8.58 in Shahabad, and an increase in three districts. A diminished number of villages, however, were affected in all districts, except Mozufferpore, the For easy reference I give a marginal table for the facts as explained with regard to the Divisions previously considered. The district reports state that there was a moderate flood from the Sone and the usual overflow of the Ganges in Shahabad, followed by no unusual prevalence of fever, while the inundations from the Gunduck and Gogra in Sarun are said to have resulted only in Malarious fever is damage to crops. Total ... | 57-16 | 5-05D | 18-10 | 1-46D | 9997 | noted as extensively prevalent in the Behar sub-division of Patna, worse in Durbhunga than any year since 1882, except 1885, and most fatal in the last

quarter, while in Shahabad the highest mortality was in the third quarter. In Chumparun the fatality was greatest in the thanas under the hills. The question of the influence of irrigation canals on fever prevalence in Shahabad has evidently formed the subject of enquiry by the Commission which sat during the year to consider the management of the Sone system of canals, for I am favoured with a copy of a letter which the Civil Surgeon

Ratio per mille. Ratio per mille. Period. Period. In 1882 In 1887 20 62 12:32 ,, 1881 ··· " 1880 " 1879 " 1878 " 1877 ... 29·20 ... 19·72 ... 12 83 In 1886 6.56 " 1885 " 1884 12 93 10.87 .. 188**8** 12.66 8.13

sent to the Commission, in which he has discussed the subject. carefully reference I give in the margin the incidence of fever in Shahabad since 1877; unfortunately the record for the earlier years is very defective. The Civil Surgeon's conclusions are as follows:-"It seems to me from a study of such

statistics as are for hooming on this subject that canal irrigation of this district has without doubt intensified pre-existing disease producing influences. It is a mistake to assert, as is sometimes done, that malarial fevers were almost unknown previous to the canal period. The fact is that the district has been subject to malarial fevers for a very long number of years, and it is also, I believe, a fact that in recent epidemic years the district suffered certainly to a greater degree, but in common with neighbouring districts. fear it cannot be denied that obstructions to drainage have been caused by But numerous other obstructions exist from bunds and embankments, leaving water after heavy rainfall stagnating A barren channels. Then it is said that water is wastefully used, and I can vouch for its being injuriously The cultivation of crops, such as sugarcane, requiring very frequent up, I should say that the effect of the canal system has been of a mixed nature. On the one hand they are said to have placed the district beyond danger of famine (although I do not think this to be proved if population goes on keeping pace with production as before last census when an increase of nearly $\frac{1}{4}$ of a million was found) by offering a means of saving the grops in years of drought, they have increased productiveness and made fertile what was previously barren. They have without doubt benefitted the people by affording a means of easy communication throughout the district, and one chief element of good has been the introduction of a good supply of water to places where formerly it was of very inferior quality. On the other

hand, they have brought about such conditions as without doubt promote the spread of disease, such as malarial fever, &c. These conditions can, to some extent, be improved,......but when all has been done that can be done, I fear that conditions favourable to malaria will continue to exist in years when the rainfall is above the average."

ORISSA.

Mortality from and seasonal incidence of Fever in the Orissa of other parts of the province, is again presented this year. Out of a population of 3,628,832, only 27,494 deaths are registered, or at the rate of 7.57 per 1,000; in 1886 they were 29,126, rate 8.02; and in the lustrum 1882-86, 25,949, rate 7.15. If the population be estimated at 4,105,838, the death-rate for 1887 would be 6.69 per mille. Since 1882 a very level record has been kept, but while Cuttack and Balasore give ratios of 8.59 and 8.58 respectively, and Puri one of 4.43, we cannot accept the statements presented as true, as there is good reason to believe that parts of Puri district are much more malarious than any in the other two. It seems to be, however, more a matter of registration, as Puri records a death-rate from "Other causes" of 14.76 per 1,000, more than three times as high as Cuttack and more than twice as high as Balasore. Deaths were registered from fever in 9,925 or 47.80 per cent. of villages in 1887, against 9,464 or 46.23 in 1886, so that there has been more extensive diffusion, but less mortality in the year under review. The severity of the disease month by month and rainfall in 1887 are con-

Months.	Deaths in 1887.	Rainfall in 1887.	Average deaths during decade 1877-86,	Average rainfall of previous years.	Months.	Deaths in 1887.	Painfall in 1897.	Average deaths during decade 1977-36.	Average rainfall of previous
January February March April May June	8,385 2,503 2,408 2,052 1,751 1,400	Nri. 1°45 74 6°86 5.87	2,951 2,306 2,251 1,945 1,685 1,507	30 111 133 858 911	July August September October November	1,614 1,052 2,005 2,360 2,891 3,074	11:44 9:30 6:41 4:19 88 Nul.	1,601 1,765 1,845 2,191 2,843 3,570	12.60 11.33 10.75 6.49 1.30

trary, approximating to the rule of districts in Lower Bengal.

Districts.	Percentages of villages attack- ed in 1987.	dogueros	Ratio of deaths por 1,000 of copulation in 1887.	Increase or decrease as compared with 1886.	Increase or decreuse as compared with 1882-86.
Cuttack Puri Balasore	57°56 31'90 41'24	'88 ≠ '31 ≠ 1'60 <i>D</i>	8:59 4:13 8:58	11 <i>D</i> .73 <i>I</i> 2:20 <i>D</i>	'58 I '51 I '14 I
Total	47-80	1.57 I	7.57	'45 D	·42 I

trasted marginally with that of the decade . 1877-86 and the average monthly rainfall. Judging from the figures, the rainy months were very healthy and the cold season the con-

The facts disby closed the mortuary returns 1882 since are marginally also shown, and indicate a considerably increased prevalence and somewhat

enhanced mortality in Puri against a decrease of both in the Balasore district in 1887. Fever seems to have prevailed severely in Khurda sub-division of Puri, and than Banpur, lying near the Chilka Lake and abounding in jungle, has before been noted as a very feverish locality.

CHOTA NAGPORE.

71. In this Division 65,459 deaths are reported, giving a death-rate per 1,000 of 15·10 from the census population of 4,334.178. The numbers in 1886 were 55,712, Nagpore Division of the Province in 1887.

The year under review therefore gives an excess death-rate over 1886 of 2·25, and above the lustrum of 2·84 per 1,000. The number of villages recording deaths was 15,514, or 62·65 per cent., against 14,413, or 57·69 per cent., in 1886. These figures indicate that the disease was more fatal and widespread than the year before, and attended by considerably more casualties than the average of the five-year period. If we estimate the population at 5,525,580, the death-ratio for 1887 would be only 11·84 per 1,000.

| Ratio per mille. | Hazaribagh | ... | ... | 21 35 | Manbhum | ... | ... | 13 53 | Lohardugga | ... | ... | 12 85 | Singbhum | ... | 12 18

In order of mortality the districts stand as marginally given, Manbhum displacing Lohardugga from the second place which it occupied last year, otherwise the arrangement is unaltered. The

• MONTHS.	Deaths in 1897.	Rainfall in 1897.	Average deaths of decade 1877- 86.	Average rainfall during previous years.	Montus.	Deaths in 1887.	Rainfall in 1587.	Average deaths of decade 1877-88.	Average rainfall during previous
Jenuary February March April May June	4,170 8,683 4,418 5,227 5,638 4,688	1°70 Nil. °10 °50 7°99 6°02	8,164 8,021 8,558 8,982 8,848 8,621	'54 '78 1'03 '56 2'58 8'04	July August September October November December	6,113 7,130 6,537 6,409 6,048 5,408	12:65 12:41 6:62 1:36 Nil. Nil.	3,857 4,712 4,805 4,338 4,183 8,836	12'92 12'85 8'40 8'84 '27 '81

marginal table exhibits the monthly mortality and rainfall for 1887, and the average mortality for the decade 1877-86, and the average rainfall. It appears as if

the heavy rainfall in May connected with the cyclonic storm before referred to had advanced the period of heavy mortality somewhat, that of July being much above the average. The largest number of deaths occurs in the second half of the year, and the months of highest loss of life are 'August, September, and October, in marked contrast to Lower Bengal. Marginally is shown more in detail the facts

Districts.	Percentages of villages attacked in 1887.		Ratio of deaths per 1,000 of population in 1887.	Increase or decrease as compared with 1886.	Increase or decrease as compared with 1882-86.
Hazaribagh Lohardugga Singbhum Manbhum	65°95 57°77 63°03 64°49 62°05	7:897 1:377 6:687 5:367	91:35 12:85 12:18 13:53	5:00 <i>I</i> :51 <i>I</i> 1:93 <i>I</i> 2:19 <i>I</i>	6:37 <i>I</i> *55 <i>I</i> 1:80 <i>I</i> 3:19 <i>I</i>

more in detail the facts disclosed by the mortuary returns of the year. From them also may be learned the increase of mortality and greater extension of fever among villages in every district in the

Division, compared with the five years before.

. 72. In the table in the margin will be found a statement regarding the

Incidence of Fever in the Port of Calcutta.

	In 1887.	9		In 1886.		
	Admission into hospital.	Deaths.	Ratio per mille.	Admission into hospital,	Douths.	Ratio per mille.
Fever, enteric , malarious ,, simple	8 220 65	2 1	1*05 *52	12 321 155	4 3	1*72 1 29

prevalence and fatality among European seamen in the Port of Calcutta during the last two years. It will be seen that admissions to hospital for the three kinds of fever tabulated were less under all heads in the year under

review compared with the year before, and that the ratios of mortality were also lower. There were only three deaths, two from enteric and one from malarious fever, against four from enteric and three from malarious fever in 1886. There were no deaths from simple fever. Among the Native floating population there were no deaths from malarious fever, but 22 deaths from simple fever against 15 last year, the respective ratios being 88 and 59, an enhancement of 29 per 1,000 of estimated population.

BOWEL-COMPLAINTS.

73. The figures given in the margin exhibit the deaths from bowel-

Extent of prevalence and fatality of Bowel-complaints.

	Period.		Number of deaths.	Percentage of villages attacked.		Period.		Number of	Percentage of villages attacked.
ln	1887		56,893	10.30	In	1881		57.029	11.60
		•••			,,	1880		44,969	10.14
**	1886	•••	55,693	¥·70	,,	1879		52,237	10.23
,,	1885	•••	63,808	10.69	,,	1878	•	65,282	13.44
,,	1884		58,376	10.61	,,	1877	•••	58,962	12·18
,,	1883	•••	55,27 0 .	9.32					
	1882		61,362	11.71					

complaints and the extent of their prevalence during the year and preceding decade. The number registered in 1887, 56,893, exceeds that, 55,693, of the previous year, and the excess in ratio is ·01

per 1,000; but in the ten years 1877-86 there is higher mortality in no less than six years out of the ten compared with the year under review. It is a curious

circumstance how with advancing registration the record under this head shows

Comparative prevslence of Bowel-complaints in the urban and rural circles.

	Numb	er of death	at a	Ratio	per mill	e in—	e ss i with	d with
CIRCLES.	1887.	1886,	1882-88.	1887.	1886.	1892-86,	Difference compared 1886.	Differenc compare 1862-86.
Urban Rural	8,405 48,488	9,106 46,587	8,986 4 9,916	3·48 "76	3°77 •73	8·72 •78	*29 <i>T)</i> *03 <i>T</i>	*24 <i>D</i> *02 <i>D</i>

no improvement. In the urban circles 8,405 persons are reported as having died from bowelcomplaints or at the rate of 3.48 per 1,000, against 9,106 or at the rate of 3.77 in 1886, and there is also a

decline in ratio of 24 in comparison with the quinquennium 1882-86. In rural circles, however, there has been some advance in mortality since the year before, but a decrease in comparison with the lustrum. The great difference in mortality between urban and rural circles is maintained as before, but need not be assumed as a correct statement of facts, merely a difference in the mode of recording events.

74. The seasonal incidence of these diseases is set forth in the margin,

Seasonal incidence of Bowel-complaints.

Number of Number of deaths. MONTHS. deaths. MONTHS. 5,632 5,178 July ... August February ... ٠.. 3,996 4,373 4,854 4,114 September October 4.846 March ... ••• 4,530 4,477 April May • • • November ••• ••• December 4,784 June

and begins with a heavy mortality in January, which is only exceeded by one month—August. The exceptional rise in July and August is evidently associated with the prevalence of

cholera during these two months. The last quarter shows much less loss of life than the preceding year.

75. The areas most severely affected with bowel-complaints are given below. Darjeeling district holds a conspicuous place among the districts, and there is no doubt that it is seriously afflicted with the disease known as "hill diarrhoa" and also with a fatal form of the complaint during the hot season and onset of the rains.

Districts.	Ratio per mille.	Towns.	Ratio per mille.	RUBAL CIECLES. Ratio per mille.
Darjiling Balasore Puri Howrah Serampore Cuttack	4·97 4·64 3·74 3·50 2·15 2·15	Puri Jungipur in Moorsheda- bad Serampore Chybassa in Singbham Suburbs of Calcutta Hughly it 'asore Lucrpara in Serampore Lalganj in ditto Hajipur in ditto Hazaribagh Revilganj in Sarun Raniganj in Burdwan Baranagore in 24-Pergunnahs	9·12 8·64 7·32 7·22 6·71 6·26 5·80 5·71 5·54 5·33 5·29 5·29 5·21	Dinapore in Patna 11.82 Kurseong in Darjeeling 9.20 Baliapal in Balasore 9.19 Soro in ditto 8.68 Darjiling 8.67 Jhalasore in Balasore 5.97 Mokama in Patna 5.49 Balasore 5.46 Basta in Balasore 5.29 Aul in Cuttack 5.02

76. PORI OF CALCUTTA.—The admissions into hospital of European seamen greatly decreased in comparison with 1886, and the mortality was very light, only one seaman having died of diarrhoa. Among the native floating population, however, there were both an increased number of admissions and deaths, but the rates are by no means heavy.

INJURY.

77. There were 26,630 deaths reported from injury, or a ratio of '40 in opposition to 29,081, ratio '43 in 1886. The rate of the quinquennium 1882.86 was '38 and for the decade 1877-86 '35. There is a slight improvement in figures compared with the latter periods. There were no great storm-waves or disasters on

		Sui	cide.		Wou	nds.	Accidents. killed			bite and by wild asts.	
PERIOD.			Deaths. cont. to		13.	d	18,		18°		
	Male.	Female.	Total,	Ratio po total de injury.	Deaths.	Ratio.	Deaths,	Ratio.	Deaths.	Batio.	
ln 1887 ,, 1877-86	931 933	1,817 1,558	2,748 2,491	10°81 10°47	1,385 1,417	5·20 5·96	12,103 9,624	45:44 40:48	10,394 10,241	89:03 43:07	

land during the year to swell the mortality under this head. table of mortality from different kinds of injury for the year under review and the preceding decade is marginally placed, and shows that before 8.8 accidents caused the greatest num-

ber of casualties, followed pretty closely by snake-bite and the attacks of wild animals. Suicides come next, those of females largely predominating, and

wounds are an infrequent death cause.

Seasonal incidence of deaths from Violence in 1887. •

Ratio per Ratio per mille. RURAL CIRCLES. Canning in 24-Perguunahs Bitamarhi in Mozusterpore Canning in Za-Fergunaans Kulpi in dito ... Tegra in Monghyr ... Sundip in Noakhalli ... Sujaganj in Murshidabad Kisseonganj in Nuddea ... Tanduah in Hazaribagh ... Beauleah in Mozuirerpore
Beauleah in Rajshahyo ...
Bewan in Sarun ...
Revilganj in Sarun
Barrisal in Backerganj Jessore Shekpura in Monghyr Monghyr

Following the record of former years, it is found that June to September afforded the greatest number of casualties in the year under review, the numbeing 14,586, ber against 12,044 in the remaining eight months. I give marginally the areas of greatest loss of life from injury in towns and rural circles,

and even in them it will be observed how little the ratios vary.

79. In the **Port of Calcutta** eight European seamen were drowned, but no deaths from violence are chronicled either Mortality from Violence in the among them or among the native floating popu-Port of Calcutta.

OTHER CAUSES.

The casualties grouped under the heading "Other causes" were Mortality from "Other causes" 204,813, with a ratio of 3.09 per 1,000. an advance from 190,818, ratio 2.88 in 1886, or 169,390, ratio 2.56 in the five-year period 1882-86.

The registration of such events is therefore gradually progressing.

81. I give marginally a table which shows the districts, towns, and

Areas of greatest suffering from mortality from unspecified causes.

Districts.	Ratio por mille.	Towns.	Ratio per mille.	RURAL CIRCLES.	Ratio per mille.
Puri Backorganj Sarun Burbhum Burbhum Balasore	14-72 7-83 7-63 5-99 5-52	Gya Puri Pubna Bettish in Chumparun Serampore Jamelpore in Monghyr Sewan in Sarun Suburbs of Calcutta Kendrapara in Cuttack Bhagulpore Brahmanbaria in Tipperah	18-14 18-63 18-23 12-79 12-55 12-31 11-87 11-08 10-02 9-97	Ranpur in Puri Khurda in Puri Puri in Puri Mathbariah in Backerganj Golachipa in Backerganj Gope in Puri Parwali in Sarun Bhandaria in Backerganj Lodma in Lohardugga Jogonath dighi in Tipperah Baragaon in Sarun Pipli in Puri Dinapore in Patna. Bauphal in Backerganj Perozepur in ditto Chupra in Sarun Jhaiskati in Rackerganj Banki in Cuttack Busta in Balasore Chorta in Balasore Chorta in Balasore	80°84 17'09 14'03 19'06 11'55 11'42 11'31 11'20 11'31 10'88 10'87 10'57 10'52 10'44 10'25 10'04 10'57 9'59 9'72 9'59

rural circles which ro gistered the highest mortality from "Other causes." It must be understood that the record is not a very reliable one, and depends much upon the opinions of the reporting and registering officers. Puri and Backerganj districts head the lists of mortality, and the rural area of Banpur in Puri presents the excessive ratio of 30.54 per 1,000, against 25.51 reas. Gya is the town

last year, when it also stood first in the list of rural areas. which suffers most.

Eight European seamen were affected with heat apoplexy or sunstroke in the year under review, and four died, giving European Seamen. Mortality a death ratio per mille of the average strength in from Heat apoplexy or Sunstroke. the Port of 2.10 contrasted with nine cases and six deaths, ratio 2.58 in 1886.

- 83. Only four cases of scurvy were treated against seven the year before, with no loss of life in either year. The above four cases were all admitted to hospital from one ship which came from New York, and had two kinds of limejuice on board, one supplied under the rules of the Board of Trade, and the other locally manufactured and purchased in New York, which was pronounced by the Chemical Examiner to be of weak quality. This disease has been steadily diminishing since 1884.
- 84. From other causes 1,201 European seamen were admitted to hospital, and there were 16 deaths, five of which occurred out of hospital. The death-rate is 8.45 per mille of average strongth, against one of 17.19 per 1,000 in 1886. Among the Native floating population 21 persons perished from other causes, or at the rate of .84 per 1,000 of population, against 23 deaths, rate .90 in 1886.

SECTION VII.

GENERAL HISTORY OF VACCINATION.

S5. In the Government of India, Home Department Resolution No. 28—1579-95, dated the 15th July 1887, it is ordered that the Sanitation and Vaccination Reports are to be submitted separately; the latter every third year in full; statistical tables with notes being submitted in the intervening years; and in Bengal Government letter No. 1170P of the 28th March 1888, I am instructed that a few brief remarks on the results of vaccination may, however, be incorporated with advantage in the Sanitation Report. In accordance with these orders the annual vaccination statements are attached as Appendix VII, and a few notes on the working of the Department, and results obtained during the official year 1887-88, are here given.

**86. The number of the Superintendents remained the same as the year before, but in the establishment some important changes were made. A Deputy Superintendent was added to the Ranchi Circle, and the Government establishment therein abolished; and another Deputy Superintendent was appointed to the Behar Circle to supervise the licensed vaccinators. In the Sonthal Pergunnahs Circle, the services of the Government vaccinators were dispensed with, and the licensed system introduced throughout the circle. A very considerable increase took place in the number of licensed vaccinators employed, amounting to 130, throughout the Province, coincident with the extension of the licensed system.

87. The conduct of the establishment has been generally satisfactory, with a few notable instances to the contrary.

Conduct of establishment. Among the Deputy Superintendents, chiefly men of the Assistant Surgeon class, one is under suspension for very grave offences, and the matter is before Government. Other Assistant Surgeons did not conduct their duties according to departmental rules on the subject. The mode of recruitment of these men from the Medical Department as exigencies arise does not give satisfactory results. Young Assistant Surgeons, who volunteer for the Sanitary Department, should be attached to it from the time of their joining the service, and should continue in it as a permanent sphere of duty.

88. Vaccination was maintained in the areas comprised within the town

Areas vaccinated.

Of Calcutta, and in the Metropolitan, Darjeeling, Ranchi, and Sonthal Pergunnahs Circles. In the Eastern Bengal Circle, besides the districts already overtaken, it was introduced in the remaining than of the Backerganj district, the Chittagong district only remaining untouched within its limits. In the Behar Circle, the northern half of the Gya district was overrun by the Government establishment, while Patna and Shahabad districts were attended to by licensed vaccinators under the supervision of a new Deputy Superintendent. Four districts north of the Ganges still remain unvaccinated. In the Orissa Circle, the Government establishment protected three thanahs of the Puri district for the first time, and the licensed system was extended to two other thanahs and to four thanahs in Cuttack. The Balasore district still remains to be dealt with systematically.

89. The marginal table exhibits municipal and other areas vaccinated

Municipal and other areas vac. and contrasts the number of operations performed
cinated. with those of the previous year. The serious fall-

ing off in Sudder municipalities will be observed with regret, indicating want

Arbas.	Number of · ARRAS. institutions.		performed in —		
			1887-88.	1896-87.	
Sudder municipalities	48 95	89 105	40,197 83,342	46,765 29,507	
Outlying towns Cantonments Dispensaries	19	5 18	1,792 3,391	1,568 3,560	
Juils Other places (Saidpur.	6	. 6	188	283	
B, S, R.)	1		107	6,423	
Total	168	223	78,961	88,101	

of attention to this duty on the part of medical officers. In the 168 institutions detailed, there was a falling off of 9,140 operations, and individually considered 72 of them returned less work, while 84 returned more and

one had an equal number of operations. The largest decrease is found in Monghyr, Mozufferpore, Gya, Howrah, Patna, Arrah and Behar Towns. The proportion per cent. of population vaccinated is 3.50 for males and 2.98 for females. Each of the 223 operators vaccinated 354 persons.

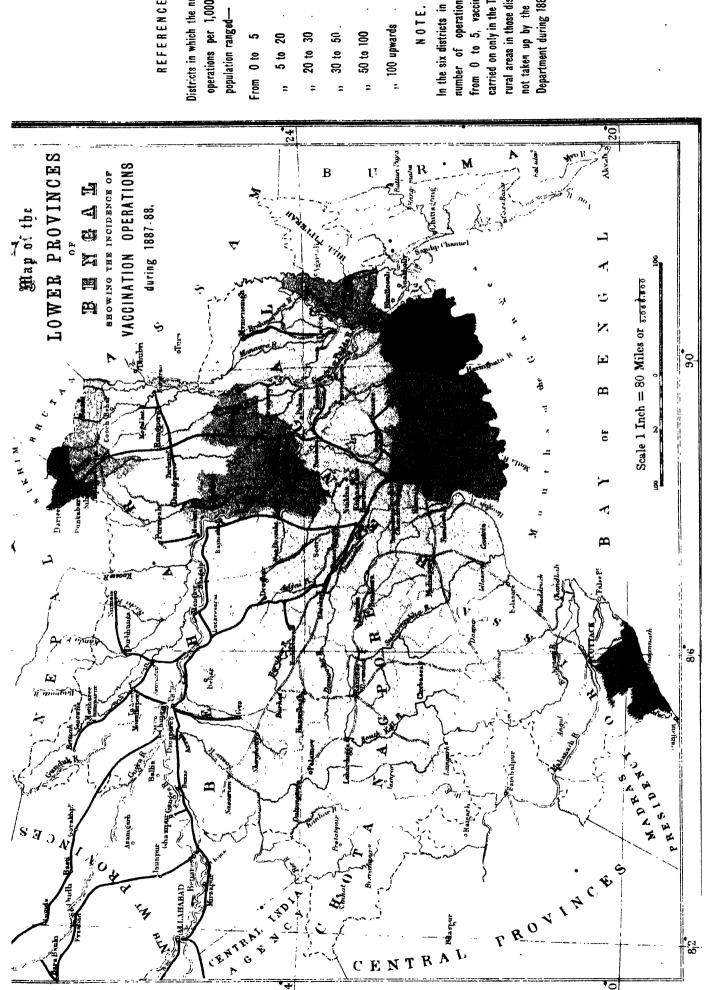
90. The work of the year was generally started throughout the Province with bovine lymph, supplemented by supplies from England and from the hills. The animal vaccination depôt in the suburbs of Calcutta, under

the supervision of the Superintendent of the Metropolitan Circle, is the source whence bovine lymph is distributed, but it was also propagated through the calf by the Superintendent of the Orissa Circle at Cuttack. From the depôt 147 vaccinated calves were sent to the Calcutta Corporation, and 40 to the suburbs out of the 268 calves vaccinated. Of the whole number, only one was a failure on account of the calf being suddenly attacked by violent diar-The Superintendent says that calf lymph is now much appreciated by the people; the numbers attending the stations being large on the days when calves were present. Besides the provision of calves, the depôt answered private calls, and 617 operations were performed at the Fort William Garrison Dispensary, among the camp-followers at Hastings, the servants at Belvedere, the station hospital at Dum-Dum, and elsewhere. No less than 4,625 charged tubes were sent to the Sanitary Commissioner's Office for distribution, in addition to those sent out direct by the Superintendent on urgent request. The depôt, it will be seen, is a most useful institution, and similar ones on smaller scale should be kept up in large municipalities, such as Patna, Gya, Dacca, &c. Till this is done, difficulties in providing fresh lymph will continue: Some experiments towards the better storing of lymph in tubes were tried by Surgeon-Major Gupta, but the results were not encouraging. The rates of success from the use of bovine lymph in primary cases was 81.96 in Calcutta, 94.25 at the depôt, 95.22 in the suburbs of Calcutta, and 98.27 in the Orissa Circle. When stored in tubes, the rate of success varied very greatly, dependent on several circumstances from 91.51 in Orissa to 8.33 in a small number of cases done in the Darjeeling Circle. When transmitted, however, from arm to arm in a large number of cases throughout the Province generally, the rate of success was 98.93 in primary, and 34.29 in secondary, operations. The character of the vesicles and resulting crusts is said to have been typically characteristic. The supplies of lymph received from England are favourably reported on. The majority of vaccine operations are done by arm-to-arm transmission of lymph. When this is not practicable, lymph stored in tubes or between glasses is employed, and very rarely crusts.

91. The total number of vaccinations performed during 1887-88 were

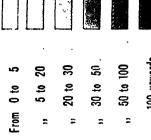
Work of the year.

1,718,655, an increase of 108,378 as compared with the previous year. Calcutta, the Metropolitan, the Eastern Bengal, Orissa and Behar Circles show a greater amount of work, while the Darjeeling, Ranchi and Sonthal Pergunnahs Circles and the Municipalities give a smaller outturn. Operations in the Darjeeling Circle were affected by changes and misconduct among the supervising staff, and in the Ranchi and Sonthal Pergunnahs Circles by the abolition of the Government establishments fomerly employed. The shaded map which faces this page shows the incidence of vaccination operations in the several districts of Bengal during the year 1887-88. During the recess 15,388 vaccinations were done to keep alive supplies of lymph, to suppress small-pox, and preserve as complete protection as possible in the Suburbs of Calcutta.



REFERENCES.

Districts in which the number of operations per 1,000 of the population ranged-



from 0 to 5, vaccination was carried on only in the Towns. The rural areas in those districts were not taken up by the Vaccination In the six districts in which the number of operations ranged Department during 1887 88,

The marginal table shows the number of primary and secondary opera-

Number of Primary and Secondary operations and rates of success achieved under both heads.

			· MOLERPY		 	
	. P	RIMARY.		SECONDA		
Ciecles.	Total number of operations in 1887-88.	Nomber of suc- cessful opera- tions in 1887-89.	Batio per cent, of successful cases in 1887-88,	Total number of operations in 1887-88.	Number of suc- cessful cases in 1887-88.	Batio per cent. of successful cases in 1887-89.
Calcutta	9,809	8,259	98.60	1,045	132	14'84
Metropolitan Circles Suburbs of Calcutta, including	891,912	890,971	99-80	100	40	40.00
Central Vaccination Depot and Cooly Depots	8,768	8,174	97:48	3,39,7	1,110	48.77
Total of Metropolitan Circles	400,675	399,145	99:75	3,497	1,150	43.62
Barjeeling Circle Ranchi Sonthal Pergunnahs Eastern Bengal Orissa Behar	274,876 144,782 108,940 540,467 84,995 70,344	278,730 141,658 108,678 539,950 80,426 68,826	98°96 97°84 99°77 99°93 94°77° 98°50	36 8 124 2 34 60	29 178 2 5	82:88 50 93:54 100 14:70 26:66
Total of Vaccination Circles	1,634,888	1,620,672	99-33	4,806	1,454	37:38
Municipalities, dispensaries, &c	77,409	72,282	~94.23	1,552+	940	61480
GRAND TOTAL	1,712,297	1,692,954	• 99-11	. 6,358	2,394	44.52

tions with the rates of success obtained in each circle separately and in the municipalities and dispensaries, &c. The percentages of success. in primary cases vary from 93.60 to 99.96, 99.11 being the average for the whole Province. In secondary cases, in some instances, the numbers were so small as to afford no reliable results stated as percentages; but in Calcutta and its suburbs, where re-vaccination is extensively practised, the rates of success were from 14.84 in the former to 43.77 in the latter.

The average number of operations per vaccinator is 724, an advance of 37 per man over last year. In the circles the average was 762, and in municipalities and dis-Average number of operations performed by each vaccinator. pensaries 354. The Eastern Bengal Circle heads the list with 1,049 against 739 in 1886-87.

Sex of the vaccinated.

94. Of the persons vaccinated during the year, 851,892 were males and 787,802 were females, being in proportion according to population of 3.19 per cent. for

males and 2.93 per cent. for females.

Vaccination according to class or

During the year, 5,114 Christians, 935,986 Hindus, 728,751 Mahomedans, and 48,804 of other classes, were vaccinated. The protection afforded to Mahomedans and other classes is greater, while that of Christians and

The number under other races is more Hindus is less than the year before.

RATES PER CENT. TO POPULATION. * Mahome-dans: Christians. Hindus. In the vaccination cir-2.69 3.74 2.66 In the municipal areas 5:40 3.12 3.89 6.48 Total 8'72 2.68

than double showing that more care had been taken in distinguishing aboriginal tribes from the lower castes of Hindus. rates per cent. of population are marginally given in both circles and municipalities and the vaccinated area as a whole.

Among primary operations in the circles, children under one year formed 14.02, of one year and under six 66.99, and Vaccination according to age. of six years and above 18.97 per cent. of the total vaccinated. The vaccination of infants shows a slight improvement over last year. The rates vary from 42.81 and 36.28 in Calcutta and its suburbs to 7.49 and 4.40 per cent. in the Eastern Bengal and Orissa Circles. Rapid improvement under this head must not be looked for in mofussil areas, the prejudice against infant vaccination being still very strong.

97. The total number of villages visited by the supervising officers in the circles was 40,796, or 86.76 per cent. of the total vaccinated. The Superintendents visited 4,477, the Deputy Superintendents 4,628, and the Superintending Vaccinators 31,691 villages. This is exclusive of Calcutta

and suburbs. There was deficient inspection by Deputy Superintendents in the Behar, Darjeeling, and Eastern Bengal Circles, especially in the last circle, where the ratio is only 2.85 per cent, of total vaccinated, and the inspection of the 3rd Metropolitian Circle was irregularly conducted.

98. The total cost of vaccination for the year 1887-88 was
Rs. 1,57,846-8-2, an increase of expenditure over
the previous year of Rs. 3,262-2-6. The cost of vaccination in Calcutta was borne by the Corporation and in the suburbs by its Corporation, with

the exception of the pay of the Deputy Superintendent, which is met by Government. Other municipalities contributed Rs. 12,437,5-7, and the cost to them of each successful case was Re. 0-2-9. In Calcutta, each successful case cost Re. 1-0-3; in the suburbs Re. 0-14-2, while in the circles generally the cost Re. 0-1-5. Throughout the Province the expenditure on each successful case was Re. 0 1-6.

99. A sum of Rs. 438-7 was also spent on vaccination by the Maharajah of Durbhunga, the zemindar of Chagdighi, and from various dispensary funds. Licensed vaccinators were also allowed to practise in 14 towns and

to recover their own fees.

100. During the year under review, the licensed system of vaccination was Elicensed system of vaccination.

Extended throughout the Ranchi and Sonthal Pergurnahs Circles, and the Government operating establishments dispensed with. Licensed vaccinators were also appointed in seven thanahs of the Backerganj, in five thanahs of the Shahabad, in four thanahs of the Cuttack, and in two thanahs of the Puri districts.

Attitude of the people towards prove. but that in areas newly taken up for operation, opposition is still active, and at times impossible to overcome. In the Backerganj district, the system of agitation usual in Lower Bengal was used against vaccination, and petitions and telegrams were sent to Government. Much of this arose from the idea that compulsory vaccination was being introduced. The agitation seems to have quite subsided before the end of the season, and much success was obtained by the Superintendent in popularizing and carrying on his work. In Gya the Superintendent made little progress, and found all the better classes against him. Hindus were opponents, and the Act forbidding inoculation not being in force in much of the area taken up, the inoculators were active in opposition. Voluntary assistance to vaccination, however, is frequently recorded. In the Murshidabad and Birbhum districts, the long sustained opposition of the Ferazis is being steadily overcome. Progress was made in many villages.

102. Act V (B.C.)

1830 was extended to forty towns during the year, and has been worked with more or less efficiency.

Extension of the Compulsory Vaccination Act V (B.C.) of 1880, as amended by Act II (B.C.) of 1887, and its administration In the smaller municipalities its provisions are little utilized, but it only requires that Civil Medical Officers and Superintendents should pay proper attention to the subject to bring about a complete and efficient state of protection in the towns where the Act as amended is in force. In Calcutta the Health Officer of the Corporation reports that difficulties still arise in the case of a number of up-country opponents to vaccination, residing as they do When vaccinators discover unprotected children, the different persons resident deny knowledge concerning the parentage of the children, and no one will receive notices or summonses concerning them. lower classes, these difficulties, however, do not arise. Altogether there were 1,437 prosecutions under the Act during the year. The Health Officer of the Port, in his report already submitted to Government, has indicated the practical difficulty of vaccinating large numbers of persons arriving in small pox affected ships, without having some depôts on shore through which they must pass. In the Suburbs, 8,063 notices and 640 summonses were issued, and 331 persons were fined. In Howrah 2,277 notices were served, 76 summonses were issued, and 57 persons were fined. In fact the issue of the notice is generally all that is required. After its receipt, there is compliance with the requirements of the law. In the town of Nator in Rajshahye, where the richer people declined vaccination, the provisions of the Compulsory Act were brought to bear on three influential residents, and two were fined. In old Maldah town, when the

Superintendent arrived in December, vaccination was practically at a standstill. He had 30 notices issued to the most influential residents who had unprotected children. Summonses required to be issued to all of them before they complied. In the town of Patna, 106 notices were issued to persons who objected to get their children vaccinated, but only 88 of these notices were actually served, and the results were not satisfactory. The people generally are still more or less opposed to vaccination, and in various ways obstruct the working of the law; but there is said to be less opposition now than heretofore, and all that is required is a little more pressure upon the people, who should be made to understand that the law must be obeyed. The chief reason why vaccination is so backward in Patna is the apathy and indifference of the municipality in the matter, and the incompetence of the subordinate vaccination staff, the reorganization of which is at present under considera-In the town of Gya, vaccination was received by all classes with feelings of aversion and hostility, the higher classes among both Hindus and Mahomedans being less hostile to the measure than the masses of the people. compulsory law on the subject was on the whole satisfactorily administered. Only 170 cases were sent up to the Magistrate for prosecution, in all of which the people were let off with a warning after being served with notices to have their children vaccinated within a fixed time. In the town of Arrah, the feelings of the people against vaccination, although still strong, are less so than formerly, and vaccination is making steady progress. It is mostly resisted by Rajputs and Mahajuns. In Durbhunga town, the lower classes of the people raise no objection to vaccination, and the middle and upper classes also accept it, though they do not like it. The class of people most opposed to vaccination are the Agarwallahs and the Marwaris. During 1887-88 a large number of evasions to comply with the requirements of the law were brought to the notice of the civil authorities, and the offenders were in all cases suitably dealt with. The Civil Surgeon, however, thinks that on the whole the town is fairly protected, and this conclusion is borne, out by the fact that the mortality from small-pox during the year was only eight, or about half as much as in the year before. Mozufferpore town seems to be getting fairly protected, as the death rate from small-pox noted in the margin shows. More, however, 1886-87. 1885-86. 1887-88. in this direction could have been done if the provisions of the Compulsory Vaccination Act had been properly carried out. Registrar of Births is reported to have failed to regularly issue notices till nearly the end of December. Only five notices were issued from the Civil Surgeon's office, and in each case they had the desired effect. The Act was introduced into the town of Motihari during 1887-88, but was not properly administered. A very small number of notices were issued, and even these were often disregarded, and although the cases were reported to the Chairman of the Municipality, no person was prosecuted up to the close of the season. Only 240 persons were vaccinated during the year, out of a population of 10,307, although no opposition was met with from the people. The amount of protection efforded in this was met with from the people. The amount of protection efforded in this town is therefore very small. The Compulsory Vaccination Act was also introduced into the Bettia Town during 1887-88, and was received by the people They flocked to the doors of the vaccination without any active opposition. depôt with their children as soon as the notices were served on them. Marwaris at first showed a prejudice against vaccination, but it was soon overcome, and without difficulty. The Act appears to have worked well in this On the whole, considerable progress was made during the year, and the Municipal Commissioners are reported to have begun a more active administration of the law, to have opened depôts, and to have caused the issue of notices and summonses. Some municipalities, however, are still recalcitrant and neglect the administration of this most useful law.

103. The following table will show the progress of vaccination and its Influence of vaccination on small. result on the prevalence of small-pox during the last six years.

•	1 .	Number of areas which were under vaccination is						DEATH-RATE FROM SMALL-POX PER MILLE OF POPULATION.					
	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-86.	1882-69.	1885-84.	1864-85.	1885-96,	1896-87.	1887-88.	
Areas under vaccination	399 180	430 149	463 116	472 107	468 91	507 73	°18 °20	*13 *25	*15 *55	.08	.03	*04 *16	

SECTION VIII.

SANITARY WORKS (MILITARY).

104. Information under this head is not required from the Sanitary Commissioner for Bengal.

SECTION IX.

SANITARY WORKS (CIVIL).

105. In the table below information is given concerning the income of the Total income of the municipalities and the objects to which it was applied in 1887.

139 municipalities in the province, and the manner in which it was spent during the year under consideration:—

	, .	nding				OF I			_	.88	ludınık	:	PRRCE	NTAGE XPEND	op II	COMB
Districts.	Number of Municipalities	ncome in 1887, including balance from the last year.	Wo			Sanitary works, including roads,	• 40	er requirements.	Districts.	Number of Municipalities.	Income in 1887, including balance from the last year,	W()	itary rks.	ds,	Sanitary works, including roads.	œ.
	Nun	Inco	1887.	1996.	Ronds.	San	Police.	Other		Nar	Inc	1887.	1886.	Roads.	Sen	Police.
		Rs. A. P.									Rs A. P.					
Burdwan Bankura Barbhum Vidnapur	6 3 1 6	1,35,805 0 0 32,663 14. 1 8,586 8 11 58,663 11 7	51:82 26:72 51:65 49:89	43°24 25°75 42°90 54°00	14:88 12:72 5:69 10:19	46:70 39:44 57:35 60:09	•••	31'01 40'22 12'36 24'63	Noakhali Tupperah Patna Gya Shahabad	1 2 3 3 6	6,363 3 0 25,035 0 0 1,51,584 6 1 78,452 15 10 64,512 0 0	44.14 87.18 35.14 45.67 42.81	42°27 39°17 39°23 46°32 45°83	9.88 17.87 30.87 9.88 19.43	54-01 55-00 66-01 55-56 61-75	:::
Hughli and Se- rampore Howrah '4-Pergunnaha Nuddea	8 2 16 9	95,128 2 0	35.70 41 :4 33.31 34.90	\$1°11 31°09 33°55 35°93	15-91 20-53 18-21 21-87	51.61 61.87 51.53 56.77	3°34 4°90	24.81 22.13 21.78 23.79	Mozusterpore Durbhunga Sarun Chumparun	4 3 3	54,254 1 0 63,814 11 4 83,794 11 5 21,808 13 0	28°35 33°40 51°03 48°82	26.67 34.57 31.31 47.14	31.77 22.27 6.67 9.43	60°13 55°68 57°70 58°26	::
Jessore Murshidabad Khulua Dinajpur Rajshabye	3 4 4 1 2	24,892 4 6 97,923 8 5 15,655 8 2 38,438 7 6 87,718 2 8	34 63 43 68 18 46 54 40 43 48	38·71 42·50 17·91 47·66 42·41	12'34 11'29 25'95 11'42 14'74	46'98 54'96 44 42 65'92 58'23	::: :::	11.68 10.08 17.09 18.54 22.24	Monghyr Bhagulpore Purneah Maldah Sonthal Pergun	3000	62,302 0 0 93,934 0 0 20,211 2 6 14,555 11 3	49'61 60'05 21'92 27'28	46'03 38'28 33'09 50'89	18.76 18.62 42.40 23.06	68-38 78-68 61-32 50-34	::: :::
Rangpur Bogra Pubna Darjeeling	1 2 2 2	20,982 14 8 16,799 0 0 83,855 4 11 1,51,264 4 9	3671 24'86 49 12 39'31	39:35 26:56 40:43 46:64	9.74 16.55	48:25 41:43 43:43	***	19.61 41.12 24.31 11.56	nahs Cuttack Puri Balasore	2 3 1	17,138 4 6 51,2:3 7 11 55,8:5 2 6 14,479 1 9	48.04 34.83 43.44 41.83		14.06 5.46 20.99	71.33	
Iniparauri Dacca Faridpur Backerganj	1 2 2 4 8	16,046 9 11 1,67,253 15 1 16,863 8 4 37,316 0 0 50,633 7 6	45.75 60.25 51.15 45.28 30.39	43°40 58 54 88 26 51°78 86°85	1°1% 13 no 20°08 15 23 16°64	72.92 71.22 60.52 47.04	•••	6:68 8:31 11:90 15:47 16:87	Hazaribagh Lohardugga Singbhum Manbhum	1 1 1	17,888 13 1 15,380 7 11 3,733 10 11 10,160 4 9	50.85 36.18 53.64	54°87 41°98 52°90 51°09	34.00	64.63 71.46 51.84 63.17	::
Mymensingh Thittagong	2	37,184 0 0	82.80	30 27	80.08	63 78	•••	25.74	GRAND TOTAL	139	32,63,614 2 10	39-75	38.65	17:17	26.03	1.42

There has been a very sensible increase of income over the preceding year, amounting to Rs. 1,79,043, but two additional towns have been constituted municipalities. The percentage of expenditure in 1887 on sanitary works exceeds that of the year before by 1·10, that on roads is slightly lower; but on sanitary works, including roads, 31 higher. Only in Howrah and the Suburbs of Calcutta do the towns contribute anything to the maintenance of the police, and that a small proportion.

106. From the marginal table it will be seen that the total sanitary ex-

Heads of sanitary exponditure. Difference of 1887. Total expenditure. Heads of expenditure. Increase. Decrease. In 1887. In 1886. Rs. Rs. Rs. Rs. 3,60,591 3,41,433 75,289 81,237 6,626 7,499 14,965 1,09,804 On Conservancy, including latrines establishment ... 23,599 6,163 Drainage
Water-supply
Disposal of dead
Markets and slaughter-house
Vaccunation
Treatment of the sick
Other sanitary works 27,352 4.875 1,02,621 86,112 5,558 11,586 17,172 1,068 -4,097 2,207 2,922 47,174 12,97,383 11,92,889 1,04,994 On construction maintenance sput repair of roads 6,114 5,60,658 5,54,539 Total including roads 18,58,036 17,46,928 1,11,106

that the total sanitary expenditure, omitting the construction, maintenance and repair of roads, amounted during the year to Rs. 12,97,383, which exceeds that of 1886 by Rs. 1,04,994, and that including the sum spent on roads, the total excess will be Rs. 1,11,103, a very considerable advance. Under all the heads, except "Establishment," and "Disposal of the dead" larger sums were spent. I regret to ob-

serve the diminution under the latter head, as Mussulman burial-grounds are an urgent sanitary want, especially in Lower Bengal, and it is one Municipal Commissioners seem little inclined to meet. Details of all sanitary expenditure will be found in Appendix No. III attached to this report, which has this year been drawn up in such a manner that reference to it will be much more easy than in the similar statements attached to former reports.

107. In the preceding paragraph the sum expended on all Sanitary works

Expenditure on Original Sanitary has been considered, but in Appendix No. IV are
works. shown the percentages of income expended in each
town for Original Sanitary works, for those of an annually recurring kind, and
for all municipal expenditure proper. In the following table will be found
the names of 21 towns which expended a fair amount of income on Original
Sanitary works, calculated to bring about a permanently higher health status, the
percentages varying, however, from 48.63 to 17.07 per cent. These are contrasted with percentages of expenditure, which must yearly be incurred on
Sanitary works, and with those of municipal expenditure proper. Only two of
the towns given in the list are sudder towns:—.

Mozufferpore Lalganj ditto 47	ges on Santary works of an annually recurring nature.
Rarun Revilganj ditto 17 Rarun ditto 17 Hughli Seramptoro ditto 17	***C63 20**88 30**40 ***O22 15**24 \$5**67 ***21 48**93 15**30 ***16 18**03 48**17 *61 33**70 16**55 *41 6**49 28**96 *53 32**13 19**62 *9** 30**40 20**93 *76 39**11 23**72 *61 45**52 27**99 *61 45**52 27**99 *70 30**48 44**34 *92 41**31 37**17 *84 55**47 21**73 *84 55**47 21**73 *84 55**47 21**73 *23 42**19 36**21 *96 29**05 35**83 *61 30**11 47**84 *15 31**01 27**19 *15 31**01 27**19 *16 30**11 47**34 *15 31**101 27**19

The table below contains a list of 26 towns, 12 of which are Sudder towns, which allotted a tolerable amount of income for original sanitary works, the percentages ranging from 16.63 at Purneah to 10.12 at Arrah:—

		Purneah Kishoreganj Noskhali Nyohatti Behar Cuttack Kendrapara Utterparrah Halasore Gya Madhubani Debhatta	Town						16°63 16°10 15'48 14'89 14'67 14'76 14'75 14'75 14'62 13'46 18'80	48'18 28'47 28'62 22'62 44'75 34'55 37'12 31'72 56'69 46'89 52'47	26°98 54'66 15'76 24'33 22'33 45'55 37'30 32'35 25'06 38'83 17'01
		Kishoreganj Noakhali Nychatti Behar Cuttack Kendrapara Utterparrah Balasore Gyá Madhubani Debhatta	10 00 07 07 09 09 09 09			000 000 000 000 000 000			15:48 14:89 14:87 14:76 14:76 14:75 14:62 13:46	28:47 28:65 22:62 44:75 34:52 37:12 31:73 56:69 46:89	54.66 15.78 24.38 22.38 43.55 57.30 32.35 25.05 38.17.01
		Noakhali Nychatti Behar Cuttack Kendrapara Utterparrah Balasore Gya Madhubani Debhatta	10 00 07 07 09 09 09 09			000 000 000 000 000 000			14:89 14:87 14:76 14:76 14:75 14:62 13:46	28.65 22.62 44.75 34.52 37.12 51.72 56.69 46.89	15-76 24-33 22-35 43-55 37-30 32-35 25-05 36-63 17-01
*** *** *** *** *** *** ***		Nychatti Behar Cuttack Kendrapara Utterparyah Balasore Gyá Madhubani Debhatta	10 17 17 19 20 20 17 20		•••		•••		14:67 14:76 14:76 14:75 14:62 13:46	22*62 44*75 34*52 37*12 31*72 56*69 46*89	24·83 22·82 43·85 37·80 32·85 25·05 88·83 17·01
***	•••	Behar Cuttack Kendrapara Utterparyah Balasore Gyá Madhubani Debhatta	97 99 99 99 17 99				•••		14:67 14:76 14:76 14:75 14:62 13:46	44'75 34'52 87'12 81'72 56'69 46'89	22.32 43.55 37.30 32.35 25.05 36.83 17.01
***		Cuttack Kendrapara Utterparyah Balasore Gyá Madhubani Debhatta	99 99 90 17 90	•••		***	•••	 	14·76 14·76 14·75 14·62 13·46	34·52 87·12 81·72 56·69 46·89	43°55 57°30 32°35 25°05 38°83 17°01
***	•••	Kendrapara Utterparyah Balasore Gyd Madhubani Debhatta	03 20 17 20		•••	7		 	14·76 14·75 14·62 18·46	87·12 81·72 56·69 46·89	37·30 32·35 25·05 38·83 17·01
***	•••	Utterparyah Balasore Gyd Madhubani Debhatta	20 17 20	•••	•••	X.	•••	 	14·75 14·62 18·46	31 72 56 69 46 89	32:35 25:05 38:83 17:01
***	•••	Balasore Gyå Madhubani Debhatta	**	•••	•••		•••		14·62 78·46	56*69 46*89	25:06 36:83 17:01
•••	•••	Gyá Madhubani Debhatta	"	•••	•••	•••	•••	•••	73.46		38·83 17·01
•••	•••	Madhubani Debhatta	**							52.47	17.01
•••		Debhatta		***							
	•••			•••		•••	•••		12.81	37.65	45*80
***		Nusseerabad					•••		12.47	14.38	14.67
	•••	Puri	**		•••	***	•••		12.34	56.54	27.72
•••	4.00	Baranuggur		•••	•••	***	•••		11'94	50.53	30.70
*** ,	***	Mozniferpur	••						11.81	49.48	S68
					-				11.57	89:01	25:29
									11.26	44-37	25.79
									11.04	80:36	41.89
									10.83		4540
							,		10.79		22.75
			**								27:81
•••											25.04
•••											23.04
•••	***		•					1			62.51
***	•••										28.55
•••	•••	Wilen	**	•••	•••				-7 -4		20 00
	•••	000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000	Monghyr Daudnurgur Nuddea Beidysbatti Darbhanga Howrah Kanaghat Muklagacha Baili Arrah	Monghyr Daudnurgur Nuddea Baidyabatti Darbhanga Howrah Kanaghat Muklagacha Baili Arrah	Monghyr Dandnurgur Nuddea Baidyabatti Darbhanga Howrah Kanaghat Muktagacha Baili Arrah	Monghyr Daudnurgur Nuddea Baidyabatti Darbhanga Howrah Kanaghat Muklagacha Baili Arrah	Monghyr Daudnurgur Nuddea Baidyabatti Darbhanga Howrah Kanaghat Muktagacha Baili Arrah	Monghyr Daudnurgur Nuddea Baidysbatti Darbhanga Howrah Kanaghat Baili Arrah	Monghyr Daudnurgur Nuddea Baidysbatti Darbhanga Howrah Kanaghat Balli Arrah	Monghyr	Monghyr 11.57 59.61

In the following table are exhibited a long list of 67 towns, 25 of which are Sudder towns, in which insignificant percentages of income from 9.91 to 13 were spent on Original Sanitary works:—

Districts.				Name	es of To	owns.		Percentages on Original Sanitary works,	Percentages on sanitary works of annually recurring nature.	Percentages c all municipa expenditure proper.		
Barun	•••			Ohmpra .	Town			•••		9-91	52-73	81.50
Burdwan Backerganj	•••	•••	•••	Raniganj Burrisal	**	•••	•••	•••	•••	9.81 9.81	85.83 83.08	13°49 19°57
Nuddes		•••		Birnegar	••	•••	•••	•••	•••	9.47	16.11	59.85
aridpur		• • •	***	Faridpur	**	***	•••	***	•••	9.40	70.81	18'41
kajshahye Khulna	•••	•••	•••	Rampur Bauleah Khulna	27	•••	•••	•••	•••	8-05	59°94 81 29	22.00
Rangpur	•••	•••	•••	Rangpur	**	•••	•••	•••	•••	8.83	87.48	15 [.] 72 27.77
Murshidubad	•••	•••	•••	Kandi	"	•••	•••			8.71	. 87.67	31.78
donabyr	***	•••	•••	Jamalpur	**	•••	•••	•••	•••	8.00	61:95 29:78	26:83 38:97
essore	•••	••••	•••	Kotchandpur Old Maldah	**	•••	•••	•••	•••	7:96 7:71	41.61	39.31
Shulna	•••	•••	•••	Satkhira	"		•••	•••		7:11	32.80	27.42
lazaribagh	•••	••	•••	Hazaribash_	,,	•••	***	•••	•••	6.74	12.24	27'84
4 Pergunnahs Tughli	•••	•••	•••	South Dum-Dum Ban-bermh	**	***	•••	•••	***	6·65 6·42	17:47 82:47	15°39 . 57°07
t-Porgunnaha	•••	•••	•••	Bussirhat *	"	•••	•••	•••	•••	6.50	28.30	52.70
ipperah	•••	•••	•••	brahmunberiah .	"	•••	•••			6.19	45.98	86.04
4-Percunnaha Ditto	;	•••	•••	Goburdanga	.,	•••	•••	•••	•••	5.87	. 53'84	34.83
lackerganj	•••	•••	•••	Suburbs of Calcutta Perozepur	,,	***	•••	***	•••	5·84 5·59	43.89 40.84	35°79 42°43
urdwan		•••	***	Kalna	"	•••	•••	•••	•••	5.23	20.97	48.80
Ditto		•••	•••	Paibat	**	•••	•••	•••	•••	5'38	35'18	60.00
Dacca Bankura		***	•••	Dacca Bankura	,,	•••	•••	***	•••	5·37· 5·13	71-29 58:46	19:51 28:51
lymensing	•••	•••	•••	Netrokona	**		•••	•••	•••	2.03	25.43	8.80
huhuhud	•••	•••	•••	Dumraon	•••	•••	•••	•••		5.03	40.88	41.63
aridpur atna	•••	•••	•••	Madaripur Patnu City	**	.1.	•••	•••	•••	4.88 4.119	55°22 62°64	80.50 80.50
ackergani	•••	•••		Jhalokati	**		•••	•••		4.91	13:35	90.50
lidnapur	•••	•••	•••	Ramiibunpur	**					4.87	31.07	49.07
Ditto	•••	•••		Tumluk	7.7	•••	•••	•••		4.82	47 08	46.74
barjeeling Inajpur	•••	•••	•••	Darjeeling Dinajpur		•••	•••	***		4°48 4°48	44*90 61*49	28 49 21:39
lymensing '		•••	•••	Sherepur		•••	•••	•••	:::	4.24	84.06	62.73
- Porgunnahs	•••	•••	•••	South Suburban	••	•••		•••		4.53	66.58	25.92
irbhum humparun	•••	•••	•••	Suri Bettiah			•••	•••	}	3.63 2.63	53:43 59:21	19 ·7 3 22·06
arjiling	•••	•••	•••	Kurseong	**	** 1	•••	•••	:::]	3.71	20.15	17.00
lughli		•••	•••	Kotrung	,,	•••	•••	***		8.64	38.23	35.64
lurshidabad ogra	•••	•••	•••	City Murshidabad	**	•••	•••	•••	•••	3.63	48:41	12.91
va	•••	***	4	Bogra Tikari	,, ,,	•••	•••	•••		3·30 3·07	45.11 23.01	55°41 28°50
idnapur		•••		Midnapur	1,	•••	•••	•••		2.93	65.32	27.89
hahabad	••	***		Juadispur	**	•••	•••	•••		2.40	88.89	81.80
-Pergunnahs	•••	***	•••	South Barrackpur Sherenur	9.3	•••	•••	•••		2·60 2·60	58.88 40.33	36·52 40·26
- Fergunnahs	•••	•••	•••	Barripur	*,	•••	•••	•••	:::	2.31	48.59	33.66
uddea		***		Kumarkhali	**	•••	•••	•••		2.18	35.64	28.15
ughli	•••	•••	•••	Hughli and Chinsurah	**	• • •	•••	•••		1.80	54'23	40'78
nidah huina .	•••	***		English Bazar Chunduria	**	• • •	•••		•••	1.68	49°08 18°12	39°54 48°99
urshidabad	•••	•••		Berhampur	**	::3	•••	***	-::	1.59	66.46	10.05 -
idnapur	•••	•••		Chunderkons	**	•••	•••	•••	•	1'48	85*03	48*46
alpaiguri hahabad	•••	•••		dalpaiguri Bnubnah	**	•••	•••	***	••• }	1.35	45°54 83°93	14.23
ymensing	•••	•••	•••	Jumalpur	**	•••	•••	•••	:::	1.00	22.83	61·40 35·48
hahabad	•••	•••	•••	Buzar	"			•••		1.04	66.26	81.41
huniparun urdwan	•••	•-•	•••	Motihari Burdwan	**	•••	•••	***		78	51.03	47.40
ackerganj	•••		•••	Nalchitti	*	•••	•••	***		·77	46.94° 23.58	41'48 23'16
urshidabad	•••	•••	•••	Jangipur	,,	•••	•••	•••	:::	•78	50.88	. 29.80
lidnapur 'uddea	•••	•	•••	Lhirpai	**	•••	•••	***		-74	53.12	32.01
PAROTO	•••	•••	•••	Kishnaghr Jessore	**	•••	•••	•••	}	*38 *36	81.03 55.41	15.47
hittagong		•••	Ξ.	Chittagong	21	•••	•••	•••	:::	36	66.2	32 ·81 33 ·10
ankura	•••		•••	Sonamukin	,,	••••	,			. 18	15.08	68-74
	_	otal	1	67 Towns.								

In 25 towns no expenditure was incurred on these very necessary works.

108. The following abstracts compiled from Appendix No. III do not give

Summary of Sanitary Works exc.

cut-d in Town and Districts and by private persons.

all the figures on the several heads, in some cases information not being available in the district reports:—

IN THE TOWNS.

(Carried out from Municipal Funds, and in a few cases from Road Cess Funds.)

No.	Nature of works.	Amount.	No.	Nature of works.		Amount
	$m{D}rainage.$	Rs.		Roads.		Rs.
42 59. 3 4 194	Drainage schemes Pucca new drains constructed Kutcha ditto ditto Drains improved Embankinents constructed Culverts provided	4,400 17,228 3,836 11,839 1,628 18,366	172 81 11 1 28 11	Roads and lanes constructed Do. new metalled Do. improved Portable railway constructed Bridges constructed Light posts provided Cutting and clearing of jungles	***	1,14,401 82,498 13,605 80,000 9,017 47 154
	Total	52,297		Total		1,99,722

Nature of works.

Amount.

No.

Nature of works.

•	Mature of Molks.		Amount.	No.			Amount.
	Conservancy.	_	Rs.	_	Markets and slaughter-hou	.ses.	Rs.
82	Latrines (masonry, iron, kutchs portable) constructed.	and	10,681	8 8	Markets constructed Slaughter-houses constructed	••••	5,648 4,621
18	Urinals put up	•••	465	0		٠.٠	4,021
3	Cesspools filled up	•••	4,014			_	
12 139	Conservancy buildings Do. plant	•••	2,377 5,889		. Total		10,269
-00	, , , , , , , , , , , , , , , , , ,	٠	0,005				
	Total	•••	23,426	•			
	Disposal of dead.				Medical relief.	•*	•
1	Burial-grounds provided		875	7	Charitable dispensaries, hos	nitele	16,340
2	Burning ghat provided	•••	633	•	for pilgrims, asylum for pa		10,040
		-	70.500		and vaccine sheds.	-	
	Total		1;509		•		
	Water-supply.						•
	Filtered water-supply schemes	•••	27,893		74:!/		•
5	Tanks excavated	•••	4,414		Miscellaneous.		
. 2 14.	Do. re-excavated Spill drains to wells	•••	1,826 199		On land acquisition On public garden	•••	2,776 851
	Wells sunk	•••	2,479		On municipal buildings	•••	4,911
1	Khal excavated		814		On brick-making	•••	754
в	Ghâts and bridges to tanks structed.	con-	1,774				
3	Water feservoirs provided	•••	197		Total		9,292
		-			2	-	
	Total	•••	39,625		GRAND TOTAL	•••	3,52,479
		T 1	NT OUTTO TO	TOWD	torra	•	
			N THE D		•		
	(Carried out from Road (Cess 1	Funds, and	in 80	me cases from Government E	unds.)	
No.	Nature of works.		Amount.	No.	Nature of works.		Amount.
	$oldsymbol{Drainage}.$		Rs.		Roads.		$\mathbf{Rs}.$
	Drainage schemes	•••	29,692	19	Roads constructed	•••	47,018
3	Kutcha drains constructed	•••	638	7 6	Do. metalled	•••	19,663
110	Embankments constructed	•••	14,907	U	Bridges constructed Maintenance of trees on roads	ides	35,()20 3,5(10)
	('11 11/2 PPG TOWNSTI / 1/1/1						
3	Culverts provided	-	1,329		•		
	Culverts provided Total	•••	46,566		* Total	•••	1,05,199
	Total	-			• Total	••••	
3	Total Water-supply.	•••	46,566		* Total **Market*.	•••	1,05,199
	Total	-			• Total	•••	
20 1 35	Total Water-supply. Tanks excavated Tenk re-excavated Wells sunk		46,566 13,185 489 5,698		* Total **Market*.		1,05,199
3 20 1	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks		46,566 13,185 489		Markets. Medical relief.	•••	1,05,199
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals.	and	13,185 489 5,698 4,504		Markets Medical relief. Dispensary buildings		1,05,199
20 1 35	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks _khals.		46,566 13,185 489 5,698		Markets Medical relief. Dispensary buildings Buildings.		1,05,199
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals.	and	13,185 489 5,698 4,504	1	Markets Medical relief. Dispensary buildings		1,05,199
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works	and	13,185 489 5,698 4,504 12,832	1	Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow		1,05,199 . 505 . 500 ·
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals.	and	13,185 489 5,698 4,504	1	Markets Medical relief. Dispensary buildings Buildings.		1,05,199
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works	and	13,185 489 5,698 4,604 12,832		Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL		1,05,199 . 505 . 500 ·
200 1 355 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total	and	13,185 489 5,698 4,504 12,832 36,708	CHAI	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL		1,05,199 505 500 400 1,89,878
20 1 35 2	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total	and	13,185 489 5,698 4,604 12,832 36,708 RIVATE (Amount.		Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works.		1,05,199 505 500 400 1,89,878 Amount.
200 1 355 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage.	and	13,185 489 5,698 4,504 12,832 36,708 RIVATE (Amount. Rs.	CHAI No	Markets. Markets Medical relief. Dispensary buildings. Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works. Roads.		1,05,199 505 500 400 1,89,878 Amount. Rs.
200 1 355 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemes	and	13,185 489 5,698 4,604 12,832 36,708 RIVATE (Amount.	CHAI	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works.		1,05,199 505 500 400 1,89,878 Amount.
200 1 355 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemes Do, works	and	13,185 489 5,698 4,604 12,832 36,708 RIVATE (Amount. Rs. 5,000	CHAI No	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works. Roads constructed Road metalled Bridges constructed		1,05,199 . 505 . 500 . 400 1,89, \(\) 78 Amount. Rs. 1,289 220 3,420
200 11 35 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemos Do, works Embankments	and	46,566 13,185 489 5,698 4,504 12,832 36,708 RIVATE (Amount. Rs. 5,000 1,332 4,820	CHAI No	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL RITIES. Nature of works. Roads constructed Road metalled		1,05,199 505 500 400 1,89,478 Amount. Rs. 1,289 220
200 11 35 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemes Do, works	and	13,185 489 5,698 4,604 12,832 36,708 RIVATE (Amount. Rs. 5,000 1,332	CHAI No	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works. Roads constructed Road metalled Bridges constructed	•••	1,05,199 . 505 . 500 . 400 1,89, \(\) 78 Amount. Rs. 1,289 220 3,420
200 11 35 2 8	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemos Do, works Embankments	and	46,566 13,185 489 5,698 4,504 12,832 36,708 RIVATE (Amount. Rs. 5,000 1,332 4,820	CHAI No 3	Markets. Markets Medical relief. Dispensary buildings. Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works. Roads. Roads constructed Road metalled Bridges constructed Clearing of jungles	•••	1,05,199 505 500 400 1,89,878 Amount. Rs. 1,289 220 3,420 3,47
200 11 35 2 8	Total Water-supply. Tanks excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemes Do, works Embankments Total	and	46,566 13,185 489 5,698 4,504 12,832 36,708 RIVATE (Amount. Rs. 5,000 1,332 4,820	CHAI No 3	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL RITIES. Nature of works. Roads constructed Roads metalled Roads metalled Bridges constructed Clearing of jungles Tota	•••	1,05,199 505 500 400 1,89,878 Amount. Rs. 1,289 220 3,420 3,47
20 1 35 2 8 No	Total Water-supply. Tanks excavated Tank re-excavated Wells sunk Ghâts and bridges to tanks khals. Khâl works Total Nature of works. Drainage. Drainage schemes Do, works Embankments Total Water-supply. Tanks excavated Do, re-excavated	and	46,566 13,185 489 5,698 4,504 12,832 36,708 RIVATE Amount. Rs. 5,000 1,332 4,820 11,152 60,455 9,970	CHAI No 3 1	Markets. Markets Medical relief. Dispensary buildings Buildings. Inspection bungalow GRAND TOTAL SITIES. Nature of works. Roads. Roads constructed Road metalled Bridges constructed Clearing of jungles Tota Medical relief.		1,05,199 . 505 . 500 . 400 1,89,×78 Amount. Rs. 1,289 220 3,420 347 5,276
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In towns it will be seen that there is preponderating expenditure on roads, that disbursed from drainage being about a third and that on water-supply about a fifth of the amount. The "Disposal of the dead" has not a fair allotment, and more should be spent under this head with great advantage. Money is available, and I am still of opinion that the expenditure of a considerable part of municipal funds is misdirected, a matter requiring the careful

attention of the controlling officers. I am glad to observe that in 1887 there is an increase in expenditure from district funds on water-supply over the year before. It must, however, be largely augmented before any general improvement can be looked for. I would note the very small sum Rs. 3,500 spent on the maintenance of trees on road sides. This is absolutely insignificant in comparison with the wants of the province. On such lines of communication as the Grand Trunk Road in its passage through Manbhum and Hazaribagh districts, on the pilgrim road from Ranigunj to Cuttack, and at level-crossings on railways, and generally throughout the Province, trees are much required for the comfort of man and beast. In the whole expenditure from private charity, Rs. 1,39,041, a sum of Rs. 91,153 was diverted to watersupply, the most useful purpose to which it could be put; and although complaints are numerous that old tanks are everywhere silting up, it is pleasing to know that the charitable feeling prompting such outlay is not quite dead District custom varies very much; some districts contributing nothing; while others, on the contrary, spend considerable sums, as in Darbhanga, where Rs. 14,835 were spent on tanks and wells, and Rs. 5,000 given by one benevolent gentleman for a drainage survey of the Darbhanga town.

Important sanitary works completed, in progress, or commenced during the

Water-supply.—There were no important schemes of watersupply initiated or completed during the year. A sum of Rs. 243 was spent in laying down some small pipe extensions in the town of Burdwan.

In towns. In Dacca there was no extension or improvement, but some additional hydrants have been erected at Darjiling, and an increase of supply will be considered. Progress was made with the Bhagulpore Water-works, and the extension of the pipes throughout the town apparently now depends on the ability of the Corporation to raise sufficient money for the purpose. The scheme of water-supply for the towns on the right bank of the Hughli, from Scrampove to Howrah, has made no progress during the year. Since the close of the year, however, it has been suggested to the Corporation of Howrah by the late Chairman (Mr. Westmacott) that as the funds of the Municipality are not sufficient to enable it to bring down water from Rishra, as originally intended, the town can obtain a good water-supply by number up from the river Houghly at oblatide and allowing the supply by pumping up from the river Hooghly at obb-tide, and allowing the water to settle in large reservoirs before passing into consumption. If funds admit he suggests that the water should be filtered. Mr. Westmacott has also suggested the raising by the Municipal Commissioners of a loan of 5 lakhs (which he thinks they can raise for less than 6 per cent.) for the purpose of improving the water supply of the town. Other riparian towns seem to have dropped the subject of water supply—except Scrampore, which takes up an attitude of expectancy—and returned to the discussion of tank-digging for an The scheme for the water-supply of Puri has extension of water-supply. advanced no further during the year so far as I can learn. It passed into the hands of some Native Association in Calcutta I am told, but what has been done has not been communicated to me.

In the districts also no schemes of importance were begun during the year. Money was spont as in other years in excavating In the districts. tanks and sinking wells, but no systematic improve-In the Hughli district, Mr. Toynbee, the Chairment was anywhere effected. man of the District Board, after the extension of the provisions of sections 88, 89 and 90 of the Local Self-Government Act, issued a circular to every village throughout the district, inviting public-spirited zemindars and owners of tanks to come forward under section 89 and make them over to the District Board for the purpose of being repaired and maintained as a source of drinking watersupply. Instructions were issued from this office to District Boards as to the manner in which tanks should be cleaned out and properly conserved, but up to the end of the year the Chairman reports that his circular has met with no response. In the district of Burdwan, Rs. 5,800 were advanced under the Land Improvement Losns Act to nine landholders and superior tenants for clearing and deepening old and silted up tanks, and for excavating new ones. The provisions of this Act appear only to be utilized in Burdwan, but considering the clamour which arises in all parts of the country on the subject of water. supply, they might afford great relief to the people if villagers of substance

came forward and took advances. Some money was spent on Government estates and on estates under Government management in Midnapore in improving

water supply.

Drainage.—The most important scheme of town drainage in progress during the year was that in Dinajpur, the cost of which is estimated at Rs. 26,000, and will be met by the Maharajah of Dinajpur. When complete it will greatly improve the state of the town, and, as seen in partial action in the month of September, was proving most useful in carrying off surface and sub-soil water. In its orders No. 1607M.P.I., dated the 30th September 1887, the Government of Bengal, Public Works Department, was good enough to detail an Engineer to make drainage surveys of the towns of Darbhanga and Chupra, and these are now in progress. If this action be continued till suitable schemes are prepared for many of the badly-drained towns, an important step in sanitary advancement will have been made. The Burdwan Municipality employed a surveyor to take levels of the town with a view of drawing up a regular scheme of drainage which might be followed out in future years. Similar action was taken at Monghyr. It has been consistently recommended for many years, but is generally rejected by Municipal Commissioners on the ground of expense, notably in Mozufferpore, where the Commissioners obtained a rough estimate of the whole expenditure and rejected all improvement, as a completed scheme is beyond their present means. During the year Rs. 1,645 were spent on the Baluchur drainage scheme in the Murshidabad town, but only a nominal sum in Rampore Beauleah, which requires further outlay to put its drainage in a proper state. Much improvement was made at Darjiling in soling some of the stone drains with Mirzapore flags, but the proper construction and flushing of house drains require attention before the condition of the Sanitarium can be looked upon as satisfactory. After two visits, one specially devoted to the object, I got the Commissioners of Patna to provide an outfall

for the drainage of the chowk, which was before detained in the town.

The Surpai drainage works in the district of Midnapore, referred to in former reports, were proceeded with, and a sum of Rs. 29,692 expended on them during the year, and upwards of Rs. 10,000 spent on protective embankments in the same district. I observed at Murshidabad the protective embankment being raised in height so as to prevent the flood water of the Bhagirutti topping the bank and flooding the towns of Murshidabad and Berhampur. Such work may be very useful in the protection of property and crops, but when the natural overflow of the country is interfered with, some provision should be made for renewal of water-supply, and this can only be done by placing sluices on the khals entering the river, and seeing that they are opened at proper times of flood to allow good flushes of fresh water to pass into the interior, and renew

Conservancy.—Additional latrines and urinals have been supplied during the year in many towns, and some of better plan than fermerly, but the only large scheme of conservancy coming under notice during the year was the expenditure by the Commissioners of Howrah of Rs. 30,000 on a small tramway for the removal of the night-soil of the town beyond municipal limits. The employment of night-soil as manure is gradually extending, and the prejudice against crops grown on land so manured is disappearing. At Hughli and Berhampur, municipal vegetable gardens so enriched yielded admirable crops, and a fine crop of wheat was raised at Rampore Beauleah. Revenue was realized at Monghyr, Gya, and Buxar by the disposal of night-

soil and sweepings.

PORT OF CALCUTTA.

Sanitary improvements and defects with regard to the flow of sewage and drainage into the river.

of sewage from the Howrah drains at the Salt Golahs, and the overflow from the Port Commissioners' latrine at Howrah still continue, the latter evil example being imitated by the British India Steam Navigation Company when erecting a

The latrines of Fort William are still connected with the river new latrine. through the Fort ditch; and although this formed the subject of a correspondence with Government in 1885, I have not yet learned that any steps have been taken by the Military Department to put a stop to the evil.

The number of human corpses (106) found in the river and dealt with by the police was greater than in any of Corpses and carcasses in the river. corpses and carcasses in the river. the preceding four years, but the number of carcasses has largely diminished, 3,169 against 4,853 in 1886, and 4,136 in

By Government orders No. 181T.M., dated 30th June 1887, a conference was directed to assemble to consider the sanitary state of the Port referred to in paragraph 7 of Government of Bengal Resolution, dated the 20th May 1887, on the Health Officer's report of 1886. The report on the results of its deliberations was submitted to Government on the 8th September 1887.

No complaints were received during the year regarding water-supply to the Shipping. The Municipal Commissioners Water-supply to the Shipping. of the town have supplied one water-boat to take the place of one of the faulty boats, and it is to be hoped that they will continue to increase the number on the improved pattern.

113. The Municipal Act III (B.C.) of 1884 was introduced during the

year into Tangail, in the Mymensing district, and Miscellaneous Sanitary Operations of the year. into Khagoul and Dinapore Nizamut in the district of Patna. Part VI containing special regulations Extension of Sanitary laws. as to privies, drains and excavations, to building,

to sanitary measures with regard to blocks of huts, &c., and Part IX on the construction and cleansing of privies, were extended to the Ranchi Municipality, in the district of Lohardugga. The following statement contains the names of the municipalities into which the Compulsory Vaccination Act V (B.C.) of 1880 was introduced during the financial year 1887-88:—

Districts.	Names of Municipatities.	Districts.	Names of Municipalities.				
Nuddea Khulna Dacca	Chogdah Municipality Khulna ditto Dacca ditto Narainganj ditto.	Shahabad	Buxar Dumraon Sasseram Bhubush	Municipality. ditto. ditto. ditto.			
Faridpur	Faridpur ditto. Madaripur ditto.	Mozufferpore Durbhanga	Sitamurhi Lalganj Mudhubani	ditto. ditto.			
Backerganj	Burnisal ditto. Jhalokati ditto. Nalchitti ditto.	Sarun	·· { Chupra ··· { Sewan	ditto. ditto. ditto.			
Mymensing	Jumalpur ditto. Nusserabad ditto. Sherepur ditto. Kishoreganj ditto. Bazitpur '''to. Maktagachi	Monghyr Purneah	Bettiah Motihari Jamui Purneah Old Malda Jajpur	ditto. ditto. ditto. ditto. ditto. ditto.			
Chittagong Tipperah Noakhali Patna	Maktagachi Chittagong ditto. Comilla ditto. Brahmunberia ditto. Noakhali ditto. Behar ditto. Barh ditto.	Puri . Balasoro	Kendrapara Puri Balasore Ranchi	ditto. ditto. ditto. ditto. diuo.			

The Health Officer of the Port of Calcutta brought into requisition the power conferred by section 5 of Act II of 1887 in one instance, when the children on board a steamer, bringing pilgrims from Jeddah, had small-pox on board. He has explained in his report already submitted to Government the extreme difficulty of doing so without special arrangements.

In the statement given in the margin will be found the names 114. of the districts and thanahs to which the provi-Districts. Names of places. sions of Act IV (B.C.) of 1865, the Act for-Perozepur thanah. bidding the inoculation of variolous matter, Matharia were extended during the year 1887-88. These Bhandaria Golachipa Goalsakhali BACKERGANJ areas were taken up for systematic vaccination Putuakhali for the first time during the past season. Some Bauphal opposition was made to the Act becoming law in Jehanabad the Backerganj district, chiefly from the idea that it was the Compulsory Vaccination Act which Arwal Iltri Daudnagore, was being introduced. Act IV is now in force in i Tikari all the districts of Lower Bengal, except Chitta-

gong, in the greater part of Orissa, and four and-a-half districts in Behar.

The Local Self-Government Act III (B.C.) of 1885 was introduced during

Dinajpur. Rangpur. Bogra. Jalpaiguri. Backerganj. Mymensing. Chittagong. Noakhali. Tipperah. Gya Shahabad.

Mozufferpur. Darbhanga. Sarun. Chumparun. Bhagulpur. Monghyr. Purneuh. Maldah. Cuttack. Balasore.

the year into the districts noted in the margin. The Act is now in force in all the districts of the Province except Lohardugga, Hazaribagh, Singbhum, Manhhum, Sonthal Pergunnahs, Darjeeling and Chittagong Hill Tracts. The three sections -88, 89, and 90 of the Act relating to water supply—were extended during 1887 to all the districts in Bengal with the exception of

the seven mentioned above. There has not been time yet to develop their usefulness; but if District Boards utilize them properly, the people of the country will benefit very much. The Bill for the amalgamation of Calcutta and its Suburbs is still before the Council, and, it is to be hoped, will before long become law. The necessity and extreme urgency of this reform must be

apparent to all unbiassed minds:

115. The sanitary condition of the Inland Emigration Depôts in Calcutta Sanitary condition of the Calcutta continued satisfactory, the ratio of sickness was and Goulundo Emigration Depôts. less than in any year since 1882, and of the four coolies who died, three arrived in Calcutta suffering from bowel-complaints. The report of the depôts at Goalundo shows that they were well attended to, only one death having taken place. They were carried away along with the Municipality by the river Ganges, cutting away the site on which they stood. Cholera, though prevalent in the suburbs, did not spread to the depots, and there was none at Goalundo.

This forms Appendix VI attached to this report, and additional inform.

Estimate of the Sanitary state of villages associated with mortility, suggested by the Army Sanitary Commission.

ation regarding many registering circles has been added during the year. With improved registration and further careful survey, the estimate may in the end become useful, but at present the statistical

figures are too faulty to indicate the places most requiring sanitary reform, think, however, it might well take the place of Appendix No. II prepared to illustrate the large cholera map attached to this report, the latter being replaced by a shaded map of foolscap size, like the one introduced for the first time in this report. The labour of compilation in this office would thus be considerably lightened and the bulk of the report much diminished.

With reference to the orders of the Government of India, Home Depart-117.

Amounts spent by Municipalities on Drainage, Water-supply and Plant and establishment with Conservancy.

ment, No. 95 of the 30th July, information was called. for from all municipalities with regard to drainage, and water-supply schemes, and expenditure on plant

and establishment connected with conservancy. The amounts spent on the last have been very various, and depend much on the use of Part IX of the Municipal Act, or not in towns or parts thereof. With regard to dramage and watersupply, I give below a precis of information obtained, showing how far in Bengal towns action has been taken for permanent improvement under these heads of sanitation, and during my late inspections I have complied with the orders of the Government of India as far as practicable. The Bengal Government, however, as yet has not been able to associate the local engineering authorities with me, so that plans and estimates may be prepared, and I fear that the expenditure involved will be considerable. It should not, however, be overlooked that a special engineer is now employed on drainage projects for two towns in Behar, and that his services have been granted for this purpose by Government. Besides the plans detailed below, a great deal of money has been spent throughout Provincial towns on drainage and water-supply, but especially with regard to the former, expenditure should be discouraged until proper schemes are obtained, as much money will otherwise be lost in remodelling defective work. The preparation of such schemes, however, will take a great deal of time and involve a heavy expenditure.

Drainage.—Mozufferpore.—Rupees 151 were spent on a Surveyor with establishment to take levels, but scheme not prepared, and whole project

abandoned on account of expense.

Noakhali-Scheme proposed only and dropped.

Hajipur in Mozufferpore.—A small survey proposed to afford drainage to overflow of one tank.

North Barrackpore Municipality.—A Sub-Engineer prepared a scheme for whole municipality; estimated cost, Rs. 6,803. Work to be begun next official

Birnagar in Nuddea.—A drainage survey is contemplated.

Midnapore.—Drainage survey made in 1884. Scheme delayed for want of funds.

Pubna.—Survey contemplated.

Howrah.—Scheme prepared by Mr. Denham. Total estimated cost Rs. 3,14,990—Rs. 71,360-12-9 spent.

Dinajpur—A drainage scheme prepared; estimated cost, Rs. 25,000, and Rs. 13,281 already spent.

Chuprah.—Drainage survey in hand.

. Dacca.—A partial survey has been made, but no further progress.

Burdwan.—Drainage survey in hand.

Berhampore.—Two more sluice-gates to be provided.

Naihatti-Drainage works in progress under the supervision of the District

Engineer, 24-Pergunnahs.

City Murshectabad.—A drainage project has been in course of construction since 1880. Two main drains cost Rs. 30,000, and sums are yearly spent, towards completion.

Jalpaiguri.—A town survey under consideration.

Darbhanga.—Drainage survey being made.

Monghyr.—Survey made and drainage map prepared.

Cuttack.—In 1879 a general drainage scheme was prepared; estimated cost Rs. 11,543. Much has been done; an outfall made and most of the town connected with the outfall drain. Pucka side drains connected with the general scheme have been extended to many populous parts of the town.

Baranagore in 24-Pergunnahs.—A survey was made, but very little money

spent.

Chunduria in Khulna.—Drainage survey made in 1886-87 at a cost of Rs. 125-7-9, but nothing further done.

Rampore Beauleah.—A scheme of drainage prepared and seven main channels opened; cost of construction Rs. 30,000. Subsidiary channels under construction.

Water-supply.—Water-supply scheme for Howrah and other riparian

towns on the right bank of the Hooghly river in abeyance.

Mosufferpore.—Water-supply scheme prepared by the Manager, Tirhoot State Railway, and Executive Engineer, but abandoned partly from want of funds and partly from prejudice against Gunduck water.

Midnapore—A scheme for water-supply was given by the Divisional Superintendent of Works; estimated cost, Rs. 8,30,000. Not undertaken for

want of funds.

Dacca.—Extension of present scheme contemplated; cost to be incurred, Rs. 1,15,000.

Burdwan—Some extensions contemplated.

Mooghty and Chinsurah.—A scheme was made in 1884 and abandoned on the Executive Engineer, Burdwan Division, reporting that the probable cost would be about Rs. 3,59,000.

. Cuttack.—An estimate for a scheme was made at Rs. 3,00,000, but idea

given up for want of funds.

Bhagulpore.—Further extension of the filtered-water scheme depends on obtaining a loan.

SECTION X.

PERSONAL PROCEEDINGS.

Proceedings of the Sanitary Commissioner 118. I was in charge of the office throughout Officer in charge of the office the year. during the year.

Places inspected by the Sanitary Commissioner.

In January. Balasore. Cuttack. Puri.

Serajganj. Faridpore. Goalundo.

In February.

Hugli. Burdwan. Raniganj. Deoghur.

In June.

In August.

Darjiling.

Narainganj. Nasirabad. Motihari.

In September. Bettiah. Rungpore. Dinajpur Julpaiguri. In November.

Mozufferpore. Chupra. Patna. Arrah. Monghyr. Jamalpore. Bhagulpore.

Durbhanga.

In December.

Bhagulpore. Sahebganj. Purneah. English Bazar. Hazaribagh. Ranchi. Suri.

119. During this period the 34 municipalities named in the margin were inspected by me, against 38 during the preceding year. In several instances I went round them, accompanied by one or more of the local officers—Chairman and Commissioners—discussed with them the sanitary and the financial condition of the places, heard their views concerning sanitary necessities, and pointed out to them how the existing defects Of the towns could best be remedied. visited, Balasore, Burdwan, Darjiling, Narainganj were found well managed and in a more or less satisfactory condition. The health status of the rest, though not in all cases absolutely bad or unsatisfactory, was not what it Many grave defects existed should be. in several municipalities, particularly in Puri, Serajganj, Durbhanga, Patna, Gya, Mozufferpore, Suri, and English Bazar, to the detriment of the health of the whole · community. The last two, moreover,

appeared to have retrograded in sanitary status. In comparison with their condition when last visited, improvements were seen to have been carried out to a more or less extent in all the towns inspected, with the exception of Goalundo, Deoghur, Mozufferpore, English Bazar, and Ranchi. Details of the present sanitary condition of the several towns, the defects in them which needed attention, and the action taken by the Commissioners on my recommendations to deal with the insanitary conditions, will be found in Appendix V to this report. I do not consider the Commissioners of Mozufferpore, English Bazar, Old Maldah, and Suri as fit to be entrusted with the important duties of municipal government.

120. In my capacity of Professor of Hygiene in the Medical College, I delivered 20 lectures on the subject to 34 students in July and August, and also had the usual test Lecture on hygiene delivered at the Medical College. and honor examination.

I also visited all the circles of vaccination during the year except 121. Orissa.

A brief resumé of the reports I submitted to Government during the 122. year is subjoined in compliance with the orders of Reports submitted to Government during the year. Government on the subject.

The Municipal Commissioners of Sahebganj having in. March 1887 submitted a representation to the Government of Removal of the head-quarters of the Rajmehal sub-division to Sahebganj. Bengal, praying for the removal of the head-quarters of the Rajmehal sub-division to Sahebganj,

Sahebganj.

I was called upon by Government for a report on the present sanitary condition

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I was called upon by Government for a report on the present sanitary condition

I was called upon by Government for a report on the present sanitary condition of Rajmehal and its future prospects as compared with Sahebganj. I replied in my letter No. 2059, dated the 24th March 1887, that with regard to health there could be no doubt which site was to be recommended as a sub-divisional head-quarters. I pointed out the many disadvantages under which Rajmehal laboured, and the naturally insanitary condition of the place, which would require a considerable outlay of money before it could be made into a desirable spot for a sub-divisional head-quarters. Sahebganj, on the other hand, I pointed out, had none of the drawbacks of Rajmehal. It is a new place which has been well laid out by the East Indian Railway Company, has good broad pucca roads, many with pucca side drains, which are being extended every year. It has no swamps in its neighbourhood, is on the banks of the Ganges at a place where the river appears to be permanent, has an active municipal body with several European Commissioners, and from a sanitary point of view is a much more desirable place for a sub-divisional head-quarters than Rajmehal.

In July 1887 I visited Dhapa, in obedience to the orders of Government in the Public Works Department, to see Insanitary condition of Dhapa. whether any measures could be taken to improve. the sanitary condition of the place, which was reported to be very bad. Fever, it was said, was raging with unusual severity, and the place was visited with a plague of flies. I pointed out to the Public Works Department that from the position of Dhapa in the middle of the Salt Water Lake it was not to be expected that it ever could be a healthy place, though experience had shown that the employés there suffer more severely at some seasons than at others from malarial complaints. I found that there were also some circumstances which assisted in aggravating the unhealthiness of the situation, such as the trades which are carried on in the neighbourhood. These are bone-collecting, shell lime-burning and tallow-making. The general filling in of the square mile with rubbish must also be deleterious, and is the cause of the plague of flies. The deposit of Calcutta sewage into the Bidhiadhuri river below the lock, towards which it must be carried back by the flood tide is also injurious. I suggested that it would be advantageous to discharge sewage into the river lower down than at present, to remove the bone depôt and shell lime burning establishment to other situations, and in the dry season to destroy by fire the Calcutta rubbish which is at present thrown near Dhapa. In the meantime, and pending action of the Calcutta Corporation on the above suggestions, I suggested a frequent change of employés at Dhapa, giving each as short a residence there as possible, removing as many as possible at night, and detailing a native doctor with a supply of medicines to visit the place daily to treat those attacked by illness, and to assist in their removal as speedily as possible. From the appearance of the water and the state of the banks between Baliaghata bridge and the Dhapa lock, it was evident that the sanitary condition of the canal was well looked after.

Sanitation in mofusil municipalities.

Sanitation in mofusil municipalities.

Sanitation in mofusil municipality, Home Department, suggesting that a sanitary survey of each municipality in the province should be, with as little delay as possible, undertaken by the Sanitary Commissioner and by the local engineering authorities, and that plans and estimates should be prepared of all improvements necessary to provide each town with an efficient system of drainage, water-supply and conservancy. On receipt of these orders

Lissued a circular to the Chairmen of all the municipalities in Bengal, requesting

to be supplied with the following information:-

(1) A statement of drainage schemes completed, in hand, or contemplated, showing the total cost to be incurred, amount already spent, and the agency employed to carry out the schemes.

(2) The same information with regard to water-supply.

(3) A statement showing in towns how much had been spent in plant, establishment, &c., for conservancy, noting especially the yearly cost of conservancy under Part IX.of Act III (B. C.) of 1884, and what relation in amount it bore to population in parts where it was in force.

My sanitary survey is proceeding, but as yet the local engineers have not been associated with me.

Outbreak of cholera in the tea gardens situated in the Bhutan Duars and in tea gardens situated in the Bhutan Duars.

Outbreak of cholera in the tea gardens situated therein having been brought under the notice of Government, and it having been suggested that an inspection of the gardens should be un-

dertaken by an officer of the Sanitary Department with a view of enforcing certain well-defined principles of sanitation in cooly lines, I in June 1887 deputed the Deputy Sanitary Commissioner of the Darjeeling Circle to visit a fair proportion of the tea gardens in the Duars which had suffered from cholera, or which were known to be in a bad sanitary condition, and to report what suggestions he had to make to protect labourers on tea gardens from epidemic disease. He was also instructed to pay particular attention to the question of the situation, arrangement, construction and water supply of cooly lines. 1st August I submitted to Government the Deputy Sanitary Commissioner's report, which was a very full and interesting one, with my own remarks on the subject. I agreed with the Deputy Sanitary Commissioner (Dr. Peck) in ascribing the prevalence of cholera in the tea gardens to the extremely insanitary condition of the cooly lines, aided by bad food, a naturally deadly climate, and lastly, and perhaps chiefly, to a polluted water-supply. Dr. Peck pointed out that there was no resident European medical officer on the gardens east of the Jaldaka, and that the medical arrangements generally were faulty. He submitted a number of recommendations, and advised a thorough inspection of all the tea gardens in the Darjeeling and Jalpaiguri district. I did not, however, recommend such an inspection in Jalpaiguri district. I did not, however, recommend such an inspection in the Darjeeling district, as the sanitary condition of the tea gardens in that district was well known, both to me and the permanent Deputy Sanitary Commissioner, Darjeeling Circle. In Jalpaiguri district, however, the case was different, and I suggested that the Deputy Sanitary Commissioner, Darjeeling Circle, should in the cold weather visit the tea gardens in Jalpaiguri, and indicate what he thought should be done. Dr. Peck recommended that coolies should be bound under agreement, and thought that then the managers would provide medical treatment and attend to sanitary matters. I did not, however think agreements were desirable, because they would give the managers endless troubles, and be difficult to enforce; they would tend to diminish influx of free labour, and would certainly not keep coolies in the gardens if cholera or small-pox broke out epidemically. With Dr. Peck's suggestions regarding the proper laying out and construction of cooly lines, the provision of tube wells, the removal a little further from the luts of the cultivation of maize, and the cultivation of fruit trees, &c., I concurred. I suggested that the cooly lines should be under constant supervision, and be daily inspected by the native doctors employed, that places well removed from cooly lines should be used as burial-grounds, and that Tea Companies should be asked to combine and provide a competant medical man to look after a large group of gardens like that east of the Jaldaka. One thing, however, I pointed out to Government was clearly indicated, and that was to provide a proper staff for the collection of death statistics. Till the Sanitary Department is provided with correct information under this head, it is working to certain extent in the dark, and may have its attention diverted from the very place which requires it first.

127. The great cholera outbreak in Chumparun district in 1887, which

· Cholers in Chumparun.

resulted in the loss of 12,929 lives, or at the rate of 7.50 per 1,000 of the population, is referred to in paragraph 46 of this report. In accordance with the orders of Government. I proceeded to Chumparun in September, and enquired into the circumstances of the outbreak. My report, of which the following is a brief summary, was submitted to Government on 7th October 1887. I visited the towns of Motihari and Bettiah, and inspected their sanitary condition, and also that of the rural vilages in both neighbourhoods. I also went to some indigo factories widely removed from one another, and held communication with planters well acquainted with the country, and learned their views of the sanitary condition of the villages. I inspected villages in different police jurisdictions, and thus was able to form an opinion of their sanitary condition. Considering the difficulties of the season of the year, a knowledge of a very considerable area was thus acquired. The records of mortality showed that cholera had never been absent from the Chumparun district during any year from 1877 to 1887, a period of 11 years, and that 1887 was the worst of all. The whole district suffers, no police jurisdiction being exempt; and Motihari town is of all others the most severely afflicted. Adapur rural and Bettiah town following next in order. I pointed out that the figures I had examined clearly established the fact that cholera is an endemic disease in Chumparun, and that the loss of life from it is very heavy. Besides the undue consumption of fruit, I heard, during the course of my enquiries, of other dietetic errors among the people as determining local outbreaks, but I could learn nothing to connect the use of the early millets with the disease. The insanitary conditions disclosed in the towns and villages the bad and polluted water, imperfect drainage, and absence of village cleansing were mentioned in detail in my report to Government, and I suggested that the only way of improving the health of the people, and diminishing the severity of cholera, would be by the superficial cleansing of village sites, and the provision of good masonry wells in proper localities, which should be periodically cleaned out. Such measures I pointed out could be carried out under the Local Self-Government Act of 1885, and that indigo planters would no doubt assist in villages of which they hold permanent leases, if requested to do so. I also recommended that Part IX of Act III of 1884 should be extended to the town areas Motihari and Bettiah.

In October 1887 Government forwarded to me for such action as I might find it practicable to introduce copies of Segregation of Lepers. Bombay regarding the prevention of leprosy by the Complete isolation or segregation of those afflicted with the disease. On receipt of the above correspondence, I called for information from the Magistrates of districts as to whether any provision for the housing or segregation of lepers existed in any of the town of their districts, and if not, whether the local municipalities would undertake to provide any such accommodation. I have not yet received complete replies to my Circular, but from those which have been received, it appears that arrangements for the housing or segregation of lepers already exist in the districts of Midnapore and Most of the municipalities consulted, although admitting the Bankura. desirability of establishing leper asylums, regret their inability to do so for want of funds. At Purulia, in the district of Manbhum, there used formerly to exist a leper asylum supported by the municipality, but as it was found to lead to abuses from large numbers of lepers from the interior of the district resorting to it to the great annoyance of the town people, it was abolished in 1883. The German Lutheran Mission however, it is said, propose to reestablish a leper asylum at Purulia as soon as arrangements can be made for a suitable site, and the municipality have expressed their willingness to pay a small monthly contribution towards the support of the inmates. The whole question of the segregation of lepers will be considered by me when complete information has been received in my office.

129. Besides the above important matters several other sanitary questions

were enquired into and discussed, some of which are detailed below.

130. On the introduction of the Local Self-Government Act in Bengal, I, at the instance of the Deputy Sanitary Commissioner rural villages.

In at the instance of the Deputy Sanitary Commissioner, Metropolitan Circle, in May 1887, issued a circular to all Chairmen of District Boards, making

the following proposals:-

1st.—That where tanks exist, one or more, according to the size of the village, should be cleaned and then reserved for drinking, all washing and bathing being prohibited.

2nd.—That pucka wells should be sunk where no tanks exist.

3rd.—That Local Boards allot small sums to villages requiring help, and hand over the money to the headmen and punchayets with instructions to clean one or two tanks, cut down all trees from their banks, and to reserve them for drinking alone, the people contributing their share in money or free labour.

4th.—That before cleaning, the Local Boards should arrange either for free gift of the tank from the owner, or for its free use by the village community, the owner retaining his right of fishing by

red and line, or net only.

5th.—That the money to meet expenditure should come from the Road Cess Fund, part of which can be legally devoted to this purpose.

I added detailed directions as to the mode of cleaning and preserving tanks as sources of water supply, and advised the District Boards to set aside sums

annually for the purpose. These instructions were given before the extension of the provisions of sections 88, 89 and 90 of the Local Self-Government Act, with a view to the matter receiving attention during the preparation of the various district budgets.

131. In July 1887, I requested the Deputy Sanitary Commissioner of the Metropolitan Circles to report on the bone-mill in the bone-mill at Utterpara.

Sanitary condition and effects of the bone-mill at Utterpara Municipality worked by Messrs.

Arakie Brothers, the sanitary condition of which

had been called in question, and had given rise to litigation. It was stated that bad smells arose from the nature of the work, and that bone dust rising was deposited on tanks and caused their deterioration. The Doputy Sanitary Commissioner's attention was drawn to these and other points in connection with the mills. After a careful survey of the mills the Deputy Sanitary Commissioner reported that there was no bad smell of bones in the pucka godowns, and very little in the temporary shed, which could not be perceived more than six yards off, and as there were no houses near, no one could complain of the slight smell from the temporary sheds. The tanks, it was reported, were in themselves in a very bad state, for which the municipality and not the owners of the mill was much to blame. The water in these tanks was reported to be distinctly marshy and impure. The Deputy Sanitary Commissioner was of opinion that if any bone dust did fall into these tanks, which was doubtful, it could not render them any worse from a sanitary point of view than they already were. In the opinion of the Deputy Sanitary Commissioner the mill business was inoffensive and harmless. I sent copies of the Deputy Sanitary Commissioner's report to Messrs. Arakie Brothers and to the Utterpara Union, who asked for a copy of the report.

132. In July last the Deputy Sanitary Commissioner of the Metropolitan

Insanitary condition of the North Barrackpore Municipality with regard to the disposal of nightsoil. Circles brought to my notice the insanitary condition obtaining in the North Barrackpore Municipality with regard to the disposal of night-soil from latrines at Pulta and Itchapur connected with

the gunpowder magazine and factory. It was stated that night-soil was systematically thrown into the river at these places, which are scarcely a quarter of a mile north of the new water-works pump, and as the water is always pumped up at ebb tide, it was very probable that a lot of night-soil was pumped up with it. I immediately sent a copy of the Deputy Sanitary Commissioner's letter to the Officer Commanding at Barrackpore, with the request that urgent attention might be paid to the conservancy arrangements for the sepoy guards at Pulta and Itchapore. At the same time I addressed the Magistrate of the 24-Pergunnahs, saying that it was the duty of the municipality to provide a staff of sweepers to remove the night-soil from the latrines and dispose of it properly. As the then mode of disposal was a source of very great danger to the whole Calcutta community and to all drawing water from the river in the Pulta neighbourhood, I asked the Magistrate of the 24-Pergunnahs to enter as speedily as possible into communication with the Chairman of the North Barrackpore Municipality, with a view to the provision of proper arrangements.

133. No opportunity offered in this office during the year 1887 to give employment of Mohamedans in public offices.

Employment of Mohamedans in orders of Government contained in Circular No. 15, dated 7th April 1886. The Vaccination Branch of

this Department, however, affords employment to 1 Mohamedan Deputy Superintendent, 17 Inspectors, 1 Clerk, 5 Head vaccinators, and 25 Vaccinators, besides a large number of Licensed vaccinators.

134. Dr. Lynch was in charge of the Port throughout the year. He experienced great difficulty in carrying on his Proceedings of the Health officer of the Port of Calcutta.

Proceedings of the Health duties afloat when the steam-launch was laid up for repairs, which had to be executed on five different occasions during the year under report. The "bolio" provided for his use was found to be quite unsuitable, and had to be made over to the Sanitary Inspector. Dr. Lynch being unprovided with a proper boat had to perform his duties with much inconvenience in a "dingy," a most unsafe and unsuitable boat. 730 inward-bound and 871 outward-bound vessels, contain-

ing respectively 32,074 and 43,871 seamen, were inspected during 1887, against 712 and 804 vessels, with 29,930 and 37,521 seamen on board during the previous year, showing a considerable increase in the number of inspections in the year under report, notwithstanding the unfavourable circumstances alluded to above under which the work was carried on. It again gives me great pleasure to notice the energy and efficiency with which Dr. Lynch performed his onerous duties.

135. Babu Nundo Lall Haldar, the Native Inspector of the Port of Calcutta, deserves commendation for the manner in which he pector of the Port of Calcutta. deserves commendation for the manner in which he carried on his work. He inspected 12,568 boats, and visited the latrines 369 times, and found 311 of the former and 4 of the latter in a dirty condition. He made 312 complaints to the police, traced 122 cases of sickness on board of boats, and inspected 143 water-boats.

136. The following table exhibits collectively the number of villages,

Proceedings of the officers of the Vaccination Department in connection with their sanitary duties.

visited by the Deputy Sanitary Commissioner and the Deputy Superintendents of Vaccination, in connection with their sanitary duties, compared with the work performed in the preceding year:—

·	Bv	TUB 1	PRPUT	Y SAN	ITARY	Сомм	1188101	ERS.	ь	YTH			UPBRIN ATION		ENTS () P
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	1887-88.	1886-87.	Towns.	Villages.	Total.	Towns.	Villages.	Total.	18±7-89.	1896-87.	Towns.	Villages.	Total.	Towns.	Villages.	Total.
Motropolitan Suburbs of Calcutta Darjeeling Ranchi Sonthal Pergunnahs Eastern Bengal Orissa Behar Total	 1 1 7	1 1 1 1 1 1 7	35 5 2 3 2 2	616 482 737 250 212 824 891 3,512	651 487 739 253 212 824 893 3,559	15 4 9 4 3 1 8	521 78 772 783 210 595 328 3,287	536 82 781 787 213 596 336	1 2 2 Nil 1 Nil 1 1 11	4 1 2 1 Nil Nil Nil Nil	28 7 .5	1,946 - 94 435 - 432 - 341 - 3,248	1,974 94 435 346 3,288	36 1 1 5 8 	1,814 216 145 342 2,517	1,850 1 217 150 350 2,568

Among the Deputy Sanitary Commissioners the largest number of village inspections was made by Apothecary P. Veeriah Naidu of the Orissa Circle, and the smallest number by Assistant Surgeon Narendra Nath Gupta of the Eastern Bengal Circle. In the latter case, however, it should be remembered that the means of communication and district ultimest of the districts comprised within the circle, particularly so in Backerganj, in which, with 7 exceptions, all the villages inspected by the Assistant Surgeon are situated. Considering the work in each circle separately, the increase in sanitary inspections was most conspicuous in the Darjeeling Circle, while the largest falling off took place in the Sonthal Pergunnahs Circle. The retrogression in the latter case was evidently due to the permanent incumbent proceeding on sick leave early in January, and being succeeded by Moulvie Tajammul Hossain, Deputy Superintendent of Vaccination, Darjeeling Circle, who, considered individually, performed the smallest amount of sanitary work.

Among the Deputy Superintendents the largest number of villages were inspected by Assistant Surgeon Umesh Chunder Ghosh of the 1st Metropolitan Circle, who visited 664 of them, and the smallest number by Moulvie Tajammul Hossain of the Darjeeling Circle, who visited only 22 villages during the early part of the season. On the whole, however good inspection work has been accomplished during the year under review. I should mention here that the number of villages inspected for sanitary purposes by Assistant Surgeon Jogendra Nath Bhattacharjee, one of the Deputy Superintendents of Vaccination of the Darjeeling Circle, has not been included in the above table, as the information furnished by him about their condition, &c., is quite untrustworthy. The Assistant Surgeon has been suspended from duty for fabricating public records, and his case is now under the consideration of Government.

Submission of diaries by Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination, and action taken thereon by the Sanitary

137. All the Deputy Sanitary Commissioners, except Apothecary P. Veeriah nission of diaries by Deputy Naidu of the Orissa Circle, and all the Deputy Superintendents of Vaccination, with the exception of Assistant Surgeon Doorga Das Roy of the Eastern Bengal Circle, submitted their diaries of vaccina-larly. These, diaries containing as they do a mine

tion and sanitary work regularly. of valuable sanitary information, were always carefully scrutinised by me, and whenever any insufficient or perfunctory work on the part of the officers, from the Deputy Sanitary Commissioner down to the head-vaccinator, was detected, due notice was taken of it, and the recusant officer was warned or reprimanded. Such instances were, however, very few. Defects reported in the registration of vital statistics were always, and local insanitary conditions in some instances, brought by me to the notice of the local authorities concerned for necessary action.

138.

Reports on the health condition of the villages, &c., inspected by the officers of the Vaccination Department; advice tendered, and recommendation made for rectifying sanitary

A short sanitary history of the villages inspected by the Deputy he health condition of Sanitary Commissioners and the Deputy Superintendents of Vaccination of the several circles, as described in their reports on the subject, is given below. I should like to mention here that although the chief sanitary defects in villages, together with

their obvious remedies, have been pointed out year after year in the annual reports of this Department, it is somewhat surprising to see it recently stated Government of India resolution quoted in the twenty-third annual report of the Sanitary Commissioner with the Government of India, page 189) that "after nearly a quarter of a century of professed village sanitary work, but little of practical utility up to the present time, has been done," and that "this unsatisfactory result is mainly due, first to the want of a clear perception of what should be done," (the italics are mine) and, it is added, "the time has come when, by a systematic village survey from a sanitary point of view, each Provincial Government should arrive at a clear perception as to the first point." I submit that such criticism cannot well apply to this Province where the sanitary survey of villages have been accumulating for years. What is really needed is the giving effect to the recommendations so repeatedly urged by the Sanitary Department.

METROPOLITAN CIRCLES .- Surgeon-Major Kali Pada Gupta, 139.

24-Per	gunnahs	distric	:t.	Nuddea .	Distr
Thanas.		N	um b er	Thanas.	
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	•		_	Gangni	•••
Rushirhat	•••	•••	4	Ranaghat	•••
Sonarpur		•••	2	Bhaluka	•••
Duamond He	arbour	•••	5	Kushtea	•••
Bankipur		•••	1	Kumarkhali	•••
Habra .	***	•••		Alumdanga	•••
Barasat		•••	5 2	Nakaripara	•••
Naihati	•••	•••		Kaliganj	
Barripur		•••	14	Henskhali	***
Nawabganj		•••	4	Bhadalm	***
Husnabad		***	8	Kristaganj	•••
Devgunga	•••	•••	2	Krishnagar	• • •
Baduria	***		1	Mcherpur	• • •
				Choosdanga	•••
	Total	•••	47	Kalupole	***
_		'		Damurhuda	•••
E	Zugli dist	rict.	1	Jibannagar	•••
Sime			2	Nawapara	***
Singur	•••	•••	10	_	
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	Total		19	Howrak	i dist
	Total	•••		Danijur	•••
Je	ssore dis	trict.		Ulubaria	***
Gadkhali			10	To	otal
Jessore		•••	2 1		
Mamudpur		•••	9	Murshidab	ad di
Narail		•••	14	Jangipur	***
Bongong			7	Gokarna	
Lohagurah			4	Manulla Baza	ar
Jhenidah		***	7 1	Assubur	
Mahespur			i	Raghunathga	mi
Manirampu			4 1	Bharatpur	
Balikopa			i	Mirenpur	
Dillingha	•••		-	Burwa	•••
				Bhugwangols	
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	hulna di	trict.		T	otal
Bagirhat	***		13	Birbhun	. dist
Magura	•••		10		
Khuina	***	***	19	Ramporehat	•••
Kaliganj	***		ē	Nalhati	•••
TI II II II II II I	•••		5	Suri	***
Paikgacha		• •••	. 3	Shankelipur	***
Satkhira	*** ***		11	Mouressur	•••
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	Tota	٠	65	1 4	otal
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Nuddea 1	Distr	ict.	
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Thanas.			of
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Bhaluka	•••		4
Kushtea	• • • •	•••	2
Kumarkhali	•••	•••	5
	•••	***	4
Alumdanga Nakarinara	•	•••	23
Nakaripara	•••	•••	9
Kaliganj	•••	•••	
Hanskhali	•••	***	47
Bhadalia	***	••	
Kristaganj	•••	• • •	8 3
Krishnagar	• • •	•••	8
Mcherpur	• • •	•••	
Choosdanga	•••	•••	7
Kalupole	•••		2
Damurhuda	•••	•••	4
Jibannagar	•••		8
Nawapara	***	***	3
_		-	
To	otal	***	114
		· · · ·	_
, Howrah	GIBE	rict.	
Danijur	• • •	•••	11
Ulubaria	•••	•••	18
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To	otal	•••	24
		.	
Murshidab	ad di	strict	
Jangipur	•••	•••	13
Gokarna		•••	3
Manulla Baza	r	•••	1
Assupur	•••	•••	1
Raghunathga	nj	•••	6
Bharatpur		•••	8
Mirzapur	•••	•••	7
Burwa	•••	•••	5
Bhugwangola		•••	. 8
Buty		•••	18
Dewanserai	•••	***	4
_		•	
T	otal	***	69
Birbhum	au	trict.	
Ramporehat	•••	•••	10
Nalhati	•••	•••	9
Suri		•••	2
Shankalipur	***	***	.4
Mouressur	•••	***	15
_		•	
T	otal		40
		•	

M.B., Deputy Sanitary Commissioner .-This officer's sanitary inspection embraced thirty-five towns and 616 villages situated in the thanas named in the margin. An abstract from his report on the subject is given below:-

The villages seen in the marginally cited districts which comprise the Metropolitan Circles may be classified into (1) those that are situated on more or less elevated ground and are dry; (2) those that are situated on comparatively lower ground and are not so dry as the former; and (3) those that are low-lying, swampy, and abounding in bhils, jullahs, and a net-work of rivers and khals, and are waterlogged. Most of the villages visited Bankura, Birbhum, Burdwan, and Midnapur, belong to the first class and are not subject to inunda-The country is undulating and the drainage free. Those that were inspected in Hugli, Murshidabad, and the northern portion of Nuddea and Jessore, mostly fall

Burdwan dis	trict.	Midnapur district.						
Thanas.	Number of villages.	Thanas.	Number of villages					
Kaksa	12 22 9 5 8 10 06	Daspur	10 10 9 10 13 7					
Gungajalghati Sonamukhi Total	12	Total	74					

under the second class. The villages are not usually subject to inundations, but some of them are submerged during high floods. The country is generally flat and the drainage not quite free. The villages inspected in the other districts may be included within the third class. They are in many cases more or less subject to inundations,

daily tides. Dwellings.—Except in the riparian villages where some of the dwellings are pucca, houses are chiefly built on more or less raised mud floors, and consist of raud or mat walls and thatched roofs. In many cases they are surrounded by fruit trees and analysis. they are surrounded by fruit trees and gardens. Drainage, Water-supply and Concervancy.—The arrangements under these heads are described in Appendix VI to this report. Regarding water-supply, it might, however, be stated generally that in Jessore, Nuddea and Murshidabad the people of inland villages far away from rivers and bours suffer more or less from scarcity Disposal of the dead.—Cremation is usually of water during the dry season. carried on on banks of tanks, bhils, khals and rivers, while burials are made sometimes in grounds set apart for the purpose, but more often Gengeral health was on the whole fair. Advice within private enclosures. tendered. The Deputy Sanitary Commissioner gave advice to the people how to keep their homes and villages clean, and to procure the best drinking water to be had and to boil and filter it when the supply is bad. Municipal Naihnty. | Baidyabatty. | Jungipur. Inspections.—The towns named in

Bansbariah. Baroepur. Rajpur. Barusat. Goburdanga. South Barrackpore. North Barrackpore. Utterpara. Bali. Kotrong.

Bhudessur. Chogda. Ranaghat. Beernagor. Santmur. Kunerkhally. Kusntea. Nuddea. Culna. Kotechandpore. Moheshpur.

Tumlook. Ghattal. Satkhira. Taki. Debhatta. Baduru. Bussirbat, Meherour. Dainhat. Cutwa.

the margin were inspected by the Deputy Sanitary Commissioner. A short account of the arrangements obtaining in them under the various heads of sanitation will be found in Appendix VI to this report.

Umesh Chundra Ghosh, Deputy Superintendent, 1st 140. Assistant Surgeon

Number 24.-Pergunnahs district. Thanas. villages. Number Thanus. of Villages Bagerpura Narali 15 29 13 23 11 Barasat Naibati Habia 15 11 8 10 10 8 8 17 11 ... Habra ...
Deyganga ...
Barnekpore
Bhangor ...
Harwa ...
Hasnabad ...
busuhat ...
Baduria ... 343 Total Total 106 Khulna district. Khulna, Sudder Butaghotta Pagacha 13 13 18 23 18 22 11 5 6 35 18 26 14 Jessore district. Gazzintia ... Sadsha ... Bongong ... Gourapotha... Moheshpur Kotechandpur 6 11 9 33 31 7 21 19 27 Dannia Satkhira Kaliganj Asasumi Mugura Kalaroa Baserhat Rampal Morellganj Mollahat Kalaron Andread With the Reservoir Andread With

Metropolitan Circle.—This officer's sanitary inspections extended over 16 towns and 664 villages in the thanas shown in the margin. With a few exceptions he visited these very areas during 1886-87, a full account of the topography and sanitary status of which was furnished in pages 105 to 109 of this office annual report for the year Short notices regarding the general condition of these districts, considered as a whole, will also be found in the preceding paragraph. The chief points dealt with in the

Bongong, Sharsha, Gouripotha and Moheshpur, all in Jessore, and the villages on the banks of the Ally nuddee in the sudder thana of Khulna, were inundated. Drainage.—In the village of Binodpur in thana Mahomedpur in Jessore, the zemindar of the place, an indigo-planter, was found re-excavating the Binodpur Another indigo-planter was found re-excavating another khal in Magura thana in the same district, connecting the Madhukhali with the Charakhali Disposal of the dead.—The practice of throwing uncremated or partially cremated bodies into rivers and other water-courses is still carried on in almost all the thanas visited, specially in those in the district of Jessore. General health was on the whole fair, being generally better in the places that were inundated. Cases of enlargement of the spleen were noticed everywhere.

141. Assistant Surgeon Preumber Nath Mittra, Deputy Superintendent, 2nd Metropolitan Circle.—This officer inspected for sanitary purposes six towns and 574 villages situated in the

N	uddea	district		(Murshidabad distric	t-conclude
Thanss.			Number of villages.	Thanas,	Number of villages
Santijur Karimpur Ganeri Alumdanga Damuriuda Kalupole Meherpur Kotwali Chuprah Katiganj Nakasipara Hanskhali Kustah Bhaluka Kunarkhali Naopara Bhadala Chooadanga			29 10 5 4 19 17 21 6 24 9 18 11 21 21 10 10	Barna Bharulpur Kandi Kandi Kandi Kandi Kandi Kandi Kandi Bhugwangolab Kaliyangani Shagurduchi Mirzapur Raghunathgani Jo-wanserai Shamshergani Jowanserai Shamshergani Jowlat Bazar Shahanagar Goas Total Birbhum dist	4 7 7 6 8 14 7 18 9 8 5 8 2 18 171
Jagulia . Tehatta .	Tota		16 11 8 294	Shakulipur with L pur outpost Dubrajpur Naliati with Mooi outpost Rampurhaut Mowreshwar; Bolepur	ab- 13 9
Hardurpara Nawada			io 9	Total	109

thanas named in the margin. In the report submitted by him, a resumé of which is subjoined, the sanitary condition of these thanas has been separately and fully described. Broadly speaking, the district of Nuddea is on a lower level than the district of Murshidabad, and its general aspect is that of a vast level alluvial plain dotted with villages and clusters of trees, and intersected by numerous rivers and minor streams. The eastern portion of Birbhum answers to the above description, but proceeding towards the west the ground rises, and the surface consists of undulating The portion of beds of laterite.

Murshidabad west of the river Bhagirathi is high and slightly undulating, while the portion east of that river is low and exposed to annual in-The health status of these districts have been described in undations. paragraph 139 of this report, and need not therefore be repeated here. Registration.—The death statistics were verified in the prescribed manner. Discrepancies regarding the registration of the events were detected in almost every thana visited, but their number was greater in Murshidabad than in Nuddea, and greater in the latter district than in Birbhum. Recommendations.—The Deputy Superintendent suggests—(1) That in every village one or two good tanks should be reserved solely for drinking purposes. (2) That defects in drainage in a malarious than a should be promptly attended to by the District Magistrate without waiting for the opinion of influential men. (3) That house-holders should be induced to keep their premises and their surroundings clean, and that it should be made penal with the people if they do not throw sweepings and other house refuse away from the houses or from the roadsides into holes which should be covered with earth from time to time. (4) That promiscuous defeccation should be put a stop to, open, uncultivated fields or waste lands being set apart for the purpose. (5) That it should be made a duty of the chowkidars to see to the cleanliness of villages, and to report for the information of the Magistrate, through the District Superintendent of Police, any prominent unhealthy condition or nuisance they may observe. Municipal Inspections.—The towns of Nowadip, Meherpur, Ranaghat, Beernagar, Santipore and Kumarkhali were inspected by the Deputy Superintendent. A short account of the sanitary arrangements obtaining in these places will be found in Appendix VI to this report.

nts obtaining in these places will be found in Appendix VI to this report.

142. Assistant Surgeon Jadub Chunder Ghose, Rai Bahadur, Deputy SuperBurdwan district.

Howrah district.

intendent, 3rd Metropolitan Circle.—An

Burdwan district.	Howrah district.				
Number of villages.	Number of villages.				
Batgachia 1 Boothood 1 Culus 1	Ulubaria 2 Dumjoor 5				
Burdwan 2 Raina 2 Khandghose 2	Total 7				
Total 9	24-Pergunnahs. Tollygunge 6				
Hugli district. Magra 1 Singoor 1 Chunditolls 4	Somerpur 3 Bistopur 3 Mothurapur 3 Joynagor 1				
Pancus 1 Dhonakhally 3 Jehanahad 3 Goshat 2 Khanacool 2	Total 15				

17

Total

intendent, 3rd Metropolitan Circle.—An accurate account of sanitary inspections made by this officer is not available, he having died suddenly in April before submitting his report. It appears, however, from the diaries of sanitary inspections received from him, during the past year that he examined for sanitary purposes only two to was and 48 villages situated in the thanas noted in the margin. His diary for the month of March has not been received, so that the

number of villages and towns seen by him during that month is not known. This officer's inspection work was quite insignificant, but as he is dead it is useless to make any further remarks on it. Municipal inspections.—The Deputy Superintendent visited the South Suburban and the Barripore Municipalities. A short sanitary history of these places will be found in Appendix VI to this Report.

143. Assistant Surgeon Ashutosh Law, Deputy Superintendent, 4th Metropolitan

Midnapur d	listriot.	Bankura di	strict.
Thanas.	Number of villages.	Thanas.	Number of villages.
Midrapur Narainghur Danton Gopibullavpur Jhargram Bimpur Salbani Contai Egra Potashpur Bhagwanpur Sabang Raghunathpur Khajri Tunicok Panskura Moisadal Suthahatta Nundisram Ghattal Daspur Dobra Keshpur Chundrakons Gurbetta	40 11 6 27 25 25 26 16 16 5 12 12 7 22 12 7 22 12 12 7 28 25 25 25 25 25 25 25 25 25 25 25	Rankura Onda Onda Onda Raipur Raipur Khatra Gungajalghati Bishenpur Kotulpur Indas Sonamukhi Total	14 19 14 11 13 29 23 10 15 148
Total	512	l	

Circle.—This officer's sanitary inspections embraced five towns and 660 villages situated in 34 thanas in the districts of Midnapur and Bankura as exhibited in the margin. In his report on the subject, he has graphically described the sanitary condition, &c., of each of the two districts separately. But as an account of these districts has already been given in paragraph 139 of this Report, it need not be repeated here. Advice tendered .-The Deputy Superintendent always fully explained to the people the absolute necessity of keeping their own persons and their houses clean, of drawing their water-supply from such tanks, reservoirs and wells as

are not open to pollution, of removing house refuse, dung, &c., to a considerable distance from the dwelling houses, and of providing windows in the bedrooms of their houses; but little heed was paid to these instructions. often laughed at by the people, and their taunting reply was always to the effect that "what their forefathers had done before them, they must also do." mendations.—The Deputy Superintendent attributes the general indifference of the people regarding sanitary matters to ignorance, and justly thinks that before anything can be expected in the shape of improvement or change in the domestic life of the peasantry, elements of education ought to be spread amongst them. He therefore recommends the establishment of small vernacular schools and patshalas in the interior of the districts. In this I agree with him; and as the above remark applies to the whole of the rural areas in Bengal, I consider that much greater attention than is at present paid should be given to imparting a knowledge of sanitation in all existing educational institutions. Municipal inspections.—The following towns were inspected by the Deputy Superintendent during the year under review :- Sonamukhi, Bishenpur, Chundrakona, Khirpai and Ramjibunpur. A short account of their sanitary condition will be found in Appendix VI to this Report.

144. Assistant Surgeon Hari Charan Sen, Deputy Superintendent, Suburbs of Calcutta.—This officer thoroughly inspected, for sanitary purposes, every part of the suburbs of Calcutta. Their general condition, a short account of which

Haripara. Ribirbagan. Malai busti. Gossain busti. Kassibagan. Haldarbagan. Narkalbagan. Kopibagan. Nikaripara. Dugdugipara. Nawabpully. Lichubagan. Shambazar. Ghosebagan. Kurryabazar. Admenibagan. Sitaram busti. will be found in Appendix VI to this report, was anything but satisfactory. Most of the bustis, particularly those named in the margin, were found in a very filthy condition. The Deputy Superin-

tendent's remarks regarding them may be summarized as follows:—Dwellings and domestic cleansing.—The houses are in most cases low-built and damp, with thatched or tiled roofs and walls of sticks and split bamboo plastered over with mud. They are often crowded together and ill-ventilated, and their surroundings are generally very dirty and untidy, being full of house-sweepings, broken earthen-vessels, and in fact of all sorts of rubbish. Defœcation is also at times carried on around the premises. Surface cleansing is very imperfectly, if at all, done, the result being that heaps of unremoved rubbish, &c., are to be found everywhere. The condition of the private latrines is generally bad. In some cases fœcal matter was seen overflowing the gumlahs and running down to the nearest drain. Roads.—Those through the bustis are mostly kutcha and narrow and in a bad state of repair, many becoming very

nuddy and almost impassable during the rains. Drainage.—The majority of the bustis are very imperfectly drained, and are full of foul tanks and cess-pools. Most of the streets have been provided with kutcha side-drains, but these are sadly neglected. They are allowed to get choked up with rubbish, dung, &c., and are thus of no use whatever during the greater part of the year. Many contain foul stinking slush in places and their sides are also now and then fouled. Water-supply is obtained chiefly from tanks and wells that are more or less open to pollution. The supply itself is insufficient, and is often of the worst quality, being little better than diluted sewage. The remarks of the Deputy Superintendent about the grave insanitary conditions existing in the bustis were in several instances forwarded through the Magistrate of the 24-Pergunnahs to the Chairman of the Municipality for necessary action.

145. DARJEELING CIRCLE.—The following officers were in charge of this circle during the year under review:—Surgeon-Major J. J. Wood, M.B., from 1st April to 29th April; Surgeon-Major R. G. Mathew from 30th April to 30th June, and from 24th July to 16th October; Surgeon F. S. Peck from 14th June to 23rd July, and Surgeon L. A. Waddell, M.B., from 17th October till the end of

the year. The last-named officer visited for sanitary purposes five towns and 482 villages (against only 78 inspected by the Deputy Sanitary Commissioner during the previous year) situated in the 48 thanas and 8 districts named in the margin. An abstract from the report submitted by him is given below.

With the exception of the Darjeeling Hill Tract, all the districts in this circle may be said to form

part of the great Gangetic plain. Most of the villages visited in Purniah, Rajshahye and Rungpur, and several in Maldah, are low lying with considerable jungly undergrowth near the houses, while those inspected in the other districts are generally raised above flood-level. The former are in many instances situated near a water-course or marsh, and the surrounding country is more or less subject to inundation during the rains.

Dwellings.—The houses are mostly built of split bamboos with thatched roofs, the walls being sometimes

Dat	rjee	ling dis	tric	Rajshahye di	strict-	-conc	luded.			
Thanas				Number of villages.	Thanss.	nas. Number of village				
Darjeeling Kurseong Kalumpong Silliguri	•••	 Total	•••	12 2 4 4 22	Ragmara Putia Charghut Lalpur Baraigram Nattor Panchupur			6 16 9 13 15 23		
Jul	pa	guri dis	tric	rt.	Noagaon Singra	•••	•••	3 24		
Julpaiguri Shikarpur Kiranti		···	 	4 2 6	_	otal	***	140		
		Total		īi	•	a distr	rict.	_		
Purneah district.					Bogra Sherpur Adamdihi	•••	•••	9 1 7		
Kabaganj Kishengan Bahadurga Arariya		•••	 	20 2 23 17	Panchhibi 7	 Cotal		8 25		
Purnah Dandaha Gondwara		•••		35 4 15	Dinage	pore d	istric			
Munihari		Total	•••	112	Chintaman Kotwali Bangshiha	•••	•••	25 33 8		
5	W 7	John dist	 rict		Gangaram) Parbatipur	our	•••	7		
Kharba Katna	•••			5 16	,	Total	•••	69		
English B Maldah Kalichak	nzu.		•••	. 3 D	Rungy		strict			
Shibganj Nawabgar		•••	•••	•	Kumbarga Nisbetgan Mahaganj	j	•••	8 5 5		
	_	Total	••	-	Nageswari Darwani Dunla	•••	•••	9 3 1		
	ajs)	ahye di		10		Total		18		
Reaulia Tanor	::	· ···			1	70111	•••			

plastered over with mud. Their plinths are raised one or two feet above the The cow and the cattle sheds are in most cases in the immediate vicinity of the dwellings, and are usually kept in a very dirty state. Drainage, Water-supply, and Conservancy.—The arrangements obtaining under those heads are described in Appendix VI to this report. Disposal of the dead.—The Mahomedan dead are usually buried in private compounds close to dwellings or on banks of jhils and tanks. Only a few villages have burial-grounds at their Cremation is, as a rule, carried on on banks of tanks, jhils and rivers, but at places where firewood is scarce and cremation is thus rendered expensive, the Hindus, including the Rajbansis, Haris and Musahars, frequently bury their dead. Uncremated bodies are also occasionally thrown into the water. General health was bad in the Terai, and in Purniah, Jalpaiguri, Maldah, and the swampy tracts of Dinajpur, which suffered severely from malarial fever. The health of the other places was on the whole fair Advice tendered.—The insanitary conditions observed in the villages visited were pointed out to the people on the spot, and instructions given for their rectification. Recommenda. tions.—The Deputy Sanitary Commissioner recommends—(1) That properly protected wells and tanks be provided in every village, and exclusively reserved for drinking, the zemindars being required to do a great deal in this direction. (2) That burial-grounds be provided at suitable distances outside every village, and interment near dwellings rendered penal. (3) That Dr. Cunningham's Sanitary Primer, which has been introduced into village schools, should have its contents fully and properly explained to the pupils, whose knowledge of the same should be further tested by questions. Municipal inspections.—The following five towns, viz. Old, Maldah, Nattore, Sherpur, Kishenganj and Kurseong, were inspected during the year by the Deputy Sanitary Commissioner. A short account of their sanitary condition will be found in Appendix VI to this report.

146. Assistant Surgeon Jogendra Nath Bhuttacharjea acted as one of the Deputy Superintendents of Vaccination, of this circle up to 13th February 1888, when he was, as stated in paragraph 136 of this report, suspended from duty. For the reasons mentioned in that paragraph, no record of the

sanitary work performed by this officer is given here.

147. Moulvie Tajammul Hossain, Deputy Superintendent.—This officer was in charge of the Purniah sub-division of the circle up to 4th January 1888, when he was appointed to officiate as Deputy Sanitary Commissioner of the Sonthal Pergunnahs Circle, his locum tenens Assistant Surgeon Kristo Charan Bose remaining in charge of this sub-circle during the rest of the year. These officers inspected between them for sanitary purposes only 94 villages in the

By Moul	lvie '	Tajam	mul I	By Assistant Surgeon Kristo Charan Bose.				
Purniah district. Number of Thanus. of villages.				Purnia Thanas.			Number of villages.	
Purniah Amour Balrampu Kadwa Arariya		 Cotal		1 1 4 3 1 10	Purniah Damdaha Kudwa Arariya Kishenganj Bahadurganj Matigari Raniganj	•••	•••	5 6 5 4 5 5 5 4 5 5 5 4 5 5 5 4 5 5 5 4 5 5 5 5 4 5 5 5 5 4 5
Jul	l pa i g	nuri di	strict	. •	Maldah	tal dist	 rict.	
Julpaiguri Kirant Mynaguri Dhupguri Alipur Patgram		 		2 2 2 2 2 2 2	Karba Dinajpus Kalingunj Hemtabad Bam Sankol	•••	rict.	15 6 7 5 18
	-							

thanas noted in the margin. The Deputy Sanitary Commissioner justly remarks that the amount of work done by both these officers was very insufficient, specially so in the case of the former, who visited only 22 villages during three months. The attention of both officers was repeatedly called by the Deputy Sanitary Commissioner to the insufficient work being done by them, but almost with no effect. It will be seen from the table in the margin that many thanas which were inspected by the Deputy Sanitary Commissioner were also instary Commissioner were also ins-

tary Commissioner were also inspected by the two Deputy Superintendents, and as the topography, &c., of the districts containing the respective thanas have already been described in paragraph 145 of this report, it is not necessary to describe them again here.

148. RAN THI CIP OF F.—Assistant Surgeon Kasi Nath Ghosh, Officiating Deputy Sanitary Commissioner.— This officer's sanitary inspections extended over

Loh	ardu	gga d	istric	t.	Hazarıbaşk di	strict	-co	ncluded.
Thanas	٠.		_	Number of villages.	Thanas.			Number of villages,
Ranchi		••		68	Chowparan	•••		19
Mandar		•••		16	Koderma	***	•••	30
Kern		•••	•••	8G	Kharakdiha	•••		28
Lamer		•••	•••	28	Giridhi		•••	81
Khunti		***		69				
Basia	***	•••		14	į T	otul	***	215
Packet	•••	•••	***	34	ł			
Champur	•••	•••	•••	29	l			_
Sant				Manbh	um di	stric	et.	
Loharduge	B.	•••	•••	18	1			
Balumat		***	•••	30	Topchansi	•••	•••	15
		_			Jheria	***	•••	16
	7	Cotal	***	890	Tundi	***	***	19
				_	Gobindpur	•••	•••	16
				_	Para .	•••	•••	.9
IIa	zari!	ag h d	istric	rs.	Choss		•••	15
				_	Barubazur	•••	•••	29
Remgurb		•••		6	۱ -			
linzaribag	h	***		8	, T	otal	***	119
Chutra		•••		6	1			
Joseswar		•••	.,:	20		_		
Damri		•••		32	Tribut	ary 8	rate	•
Bagadar		•••	.,	29	l			
Badin		•••	•••	6] Jashpur	***	***	

two towns and 737 villages in the thanas indicated in the margin. In his report on the subject, an abstract from which is given below, sanitary condition of the visited by him several thanas described separately. has been Almost all the villages are situated on elevated ground, and in many instances, in the vicinity hills and jungles. lings.—Excepting a few in some of the large villages, the houses are built with mud, generally on low plinths, and are either thatched with straw or foos or roofed with

tiles. They are often very closely grouped together, and are consequently badly ventilated. The sleeping rooms are, as a rule, partly occupied with goods and chattles, and overcrowding of inmates occurs at night. The cow and cattle sheds are very filthy. Drainage, Water-supply, and Conservancy.— The arrangements obtaining under these heads are described in Appendix VI to this report. Disposat of the Dead.—The Hindu dead are always cremated on banks of vivers, small streams called dharas, and other water-courses.

Waste lands and occasionally banks of bandhs are also used for the purpose. The Kols generally burn their dead near dwelling-houses. Interments are carried on close to the houses, and sometimes at the outskirts of the villages. General health was on the whole fair. The Deputy Sanitary Commissioner, however, mentions that in most of the aforesaid thanas fever, and in some both fever and dysentery or cough, prevails to a more or less extent during the rains. He thinks, and I believe rightly, that the decomposition of the accumulated filth and the contamination of the sources of water supply by surface washings, combined with the dampness of the weather, generate the above complaints. Registration—Was tested in the manner laid down by the rules on the subject.

Recommendations.—The Deputy Sanitary Commissioner submits the following:—(1) That cattle-dung should be removed to open fields outside the villages, and not heaped up within the premises; (2) that all sorts of house rubbish should be burnt down at intervals; (3) that promiscuous defectation should be stopped, and the people induced to resort to waste lands selected for the purpose; (4) that some dairs, tanks or wells should be set apart in every village exclusively for drinking; (5) that cremation should not be permitted near dwelling-houses, and (6) that the town of Lohardugga should be reconstituted into a municipality. This has since been done. Municipal Inspections.—The Deputy Sanitary Commissioner inspected the towns of Lohardugga and Chatra during the year under review. A short history of their sanitary condition will be found in Appendix VI to this report.

149 .- Babu Aghore Chunder Chukerbutty, Deputy Superintendent. - This officer's

Hazarib	Lohardugga district.						
Thanas. Number of villages.		lo	Thanas.		Number of villages.		
Hazaribagh Rudhi Chowparan Chatra Huntergani Koderma Shimuria Kamgurh Jogeswar Kasunera Hagodar Duner Giridhi Kharukdiha Gowan			848527234855662	Paton; Palfongan; Chutrapur Chutrapur Hosimabadh Gurwa Mannea Mannea Balumoth Ranchi;	 		7 4 6 2 8 3 2 2 3 4

sanitary inspections extended over 104 villages in 24 thanas in the Hazaribagh and Lohardugga districts, as shown in the margin. The outturn of his work is small, but he bestowed much care and attention to enquiring into the sanitary status of individual villages. In Hazaribagh the same thana was in most cases inspected both by him and the Deputy Sanitary Commissioner. His description of the topography, health condition and other particulars of the several thanas visited by him, differs so little from that given by the Deputy Sanitary Commissioner.

sioner, and mentioned in the preceding paragraph, that it is not necessary to reproduce it here. Regarding food-supply the Deputy Superintendent states that it is somewhat deficient and dear in thanas Hazaribagh, Chowparan, Paton, Runea and Munica.

150 .- Assistant Surgeon Prosunno Coomar Dey, Deputy Superintendent .- This

By Assistant Surgeon Pro- sunno Coomar Dey. Manbhum district.				By Assistant Surgeon Basanta Kumar Nen. Manbhum district,			
Thanas. Numbe of villages		10	Thanas.	Number of villages.			
Purulia Manbazar Gourandi Rawhunathpur Para Jharia tobindpur Tandi Nirsa Topechanchi Chas	 otal		27 12 19 20 16 10 15 5 14 10 15	Singbha Scraikela Chycbassa Kharswan	Fota	trict.	13 14 4 8 20 22 18 8 103 20 105

officer acted as Deputy Superintendent up to 28th January 1888, when he proceeded on privilege leave andwas relieved by Assistant Surgeon Basanta Kumar Sen, who continued in office during the rest of the year. These two officers between them inspected 331 villages in the thanas marginally cited. The sanitary conditions, &c., of the villages seen by both in Manbhum need not be described here for the reasons mentioned in the foregoing paragraph. The villages inspected in Singbhum being almost similar in every respect, as regards conditions of life, to those in the other districts in this circle already

described; it is also not necessary to describe them again. Regarding food-supply the Deputy Superintendents say that the outturn of the rice crop was very miserable in thanas Gourandi and Raghunathpur. Recommendations.—Assistant Surgeon Basanta Kumar Sen offers the following:—(1) That cow-dung and house refuse should not be allowed to be collected in heaps near the dwellings, but

removed outside the villages; (2) that pits and filthy excavations should be filled up, and (3) that the banks of the bandhs, from which drinking water

is taken, should be raised, and inward drainage thereby prevented.

SONTHAL PERGUNNAHS CIRCLE. -Assistant Surgeon Kali Prosunno Ghosal acted as Deputy Sanitary Commissioner of this circle up to 6th January 1848, on the afternoon of which date he made over charge to Moulvie Tajammul Hossain and went on sick leave. The latter officer officiated as Deputy Sanitary Commissioner during the rest of the year. Assistant Surgeon K. P. Ghosal's sanitary inspections, which embraced only 214 villages, are considerably short of what might have been expected, but they seem to have been on the whole carefully conducted. Moulvie Tajammul Hossain inspected for sanitary purposes three towns and 36 villages in the thanas

Monghyr district.					Bhag	ulpore d	listric	t.
Thanas.				Number of village	Thanas.			umber of llages.
Gogri Khagria Ruriapur Boguserai Monghyr Luckeserai Sekundra Shaikpura Jamui Nawadi	Total			1 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Sonthal Po Deoghur Saron Madhupur Dumka Godda Rajmehal	•••	 hs Dia 	1 3 4 4
					1 7	lotal	•••	13

marginally cited. He was out on tour through this circle for 80 days, and visited 416 villages on vaccination duty; but, devoted his attention chiefly to pushing on vaccination. The number of villages seen by him in each thana does not, with three exceptions, exceed two, and from the condition of these it is almost impossible

to form a sanitary estimate of the thanas in which they are situated. points noticed in it are summarized below. The villages inspected in thanas Dumka, Godda and Rajmehal are situated on a comparatively higher level than those seen in the other thanas, which are on the same level with the surrounding country. Dwellings .- The houses are kutcha with mud walls and thatched roofs, and are in most places crowded together, ill-ventilated, and in a bad state of repair. Their floors are generally raised, and, excepting those in the villages in Soopole, they are as a rule free from dampness. The sleeping rooms are often overcrowded with all sorts of things, and the huts of the poor have insufficient accommodation for the inmates. Drainage, Water-supply and Conservancy.-The arrangements obtaining under these heads are described in Appendix VI to this Report. Disposal of the dead.—The Hindus cremate their dead on the banks of tanks and rivers, or on waste lands, or at the foot of hills, while the Mahomedans usually bury theirs at the outskirts of the villages. Advice tendered. - The Offici-General health did not on the whole appear bad. ating Deputy Sanitary Commissioner reports that when inspecting villages on vaccination duty he took the opportunity of explaining to the people the benefits of observing sanitary precautions, but with a few exceptions they were quite indifferent to the matter. In one village the people remarked that the insanitary conditions complained off by the Deputy Sanitary Commissioner had descended from their forefathers, who were never harmed by them, and that the same conditions could not now be productive of evil No doubt this is the common sentiment prevailing amongst the masses of the people.

Municipal Inspections.—The towns of Jamui, Colgong and Deoghur were inspected by the Deputy Sanitary Commissioner. A short account of the sanitary condition of these places will be found in Appendix VI to this Report.

152. EASTERN BENGAL CIRCLE.—Assistant Surgeon Narendro Nath

Backer	rganj	distri	ot. I	Daco	a distri	ct.
Thanas.		_	Number of villages.	Thanas.		Number of villages.
Bauphal	•••		86	Keranigunj	•••	7
Perozepur	•••		26			
Matharia	••.		23			
Bhaudaria	•••	•••	17			
Gulsakhali		•••	29			
Patunkhali			60			
Golachipa		•••	13			
Jhalakati			1			

Gupta, Deputy Sanitary Commissioner.—This officer inspected, for sanitary purposes, two towns and 212 villages in the thanas in the districts named in the margin. report, a brief resumé of which follows, shows that he paid attention to his duties in this The villages comdirection. prised within the aforesaid

thanas in the Backerganj district are situated on more or less low land, and are, with a few exceptions, subject to inundations, which at times

submerges the outsides and even the courtyards of the houses, carrying away all accumulations of filth and dirt, and thereby benefitting health. tions of thanas Perozepur, Bhandaria and Patuakhali are flooded by the tidal water during the new and the full moon. Innumerable rivers and khals pass through the thanas, which also abound in filthy holes and ditches. Jungle too is very dense in most of the thanas specially so in Perozepur, Golachipa, Patuakhali and Bhandaria. Betelnut, cocoanut and other fruit trees are very abundant, and at places seriously obstruct air and light. Dwellings and Domestic Cleansing. Drainage and Water-supply.—The arrangements under these heads are described in Appendix VI to this report. Disposal of the dead.—There are no fixed places for carrying on interments or cremation. The Hindus burn their dead for carrying on interments or cremation. at convenient places, sometimes in spots near the houses, and sometimes on banks of tanks or khals. The Mahomedan dead are buried either on banks of Food supply. - Sufficient rice crop was tanks or within house enclosures. The food of the people is very simple, consisting reaped almost everywhere. of large quantity of rice, little of any sort of dal, some vegetables and little Registration. The accuracy of the figures Milk and flesh are luxuries. was tested in the prescribed manner, and the work was properly performed. General Health was on the whole good. Recommendations. - The Deputy Sanitary Commissioner says that the zemindars should be directed not to impose any taxation on the excavation of tanks for drinking purposes by the ryots.

Municipal inspections.—The sanitary condition of the two towns, Muktagacha and Jhalokati, which were inspected during the year by the Superintendent, will be found in appendix VI to this report. His remarks about the condition of the former were duly communicated to the Chairman through the District Magistrate for necessary action.

Dacca dist	rict.	Backerganj district.			
Thanas.	Number of villages.	Thanas.	Numbe of villages		
Raipura Rupganj Narainganj Keraniganj Sabhar Manikganj Nawabganj Srinagar Munshiganj	1 3 6 3 4 5 7 7 1 3	Sharupkati Jhalokati Barisal Gournadi Mendiganj Bhola Total		10 12 10 1 24 3 	
Kaparia Total	36	Noakholly di Lakhimpur Noakholly	istric	6 13	
Faridpur de Goalundo Paugsa Faridpore Bhanga	6 11 9	Total Tipperah dis	 trict	19	
Shibehar Awnpore Makrudpore Madaripore Kotalipara Gopalganj Total	7 11 8 18 16 4 102	Nabinagar Brahmanberia Kasba Comillah Chandins Muradnagar Daudkandi Chandpur Hazigani	h	5 8 3 20 3 18 12 5	
Mymensing of Gafargaon Kishareganj Nikli Bazitpore	listrict 13 16 7 5	Laksham Total		6 89 •	

5 5

3

... 126

Netrokona ... Iswarganj ...

Mymensing Sherpore ... Jamalpore ...

Gopalpore ...

Total

Pingna

Tangail

Assistant Surgeon Doorga Das Roy, Deputy Superintendent.—During the year under review this officer's sanitary inspections extended over seven municipalities and 432 villages, the latter situated in six districts and 50 thanas as shown in the margin, against eight municipalities and 342 villages during the preceding year. In his report, an abstract from which is subjoined, the sanitary condition of the several districts of his circle has been dealt with conjointly. The following thanas are for the most part situated on low-lying land :- Raipura, Narainganj, Keraniganj, Sabhar, Manikganj, Nawab-Srinagar and Munshiganj Dacea, Kotalipara, Gopalganj, Madari-pur, Bhanga, Shibchar and Faridpur in Faridpur, Nikli, Bazitpur, Netro-kona, Pingna and Tangail in Mymensingh, Sharupkati, Jhalokati, Barisal, Mendiganj and Bhola in Backerganj, and Kasba, Nabinagar, Brahmanbaria, Muradnagar, Daudkundi, Chandpur and Haziganj in Tipperah, the other thanas are situated some on elevated ground and some on ground which in point of elevation occupies an intermediate position between low and elevated land. Many villages comprised within the thanas in the first group, and some of those situated in the others are subject to inundations which are not unmixed evil, proving beneficial not an some respects and harmful in others. The diurnal tides affect in a marked

degree thanas Madaripur, Kotalipara, Gopalganj, Sharupkati, Jhalokati,

Barisal, Mendiganj, Bhola, Lakhimpur, Noakholly, Daudkandi, Kerani, ganj and some others. Most of the villages inspected by the Deputy Superintendent abound with ditches, hollows, gors and other excavations from which earth was no doubt originally taken for raising the house-plinths. These seriously interfere with the surface drainage of the villages, and by retaining water for a long time after the cessation of the rains, render them damp and unhealthy. There are also numerous bhils and swamps within the limits of several of the thanas. Jungle too is very great in some of them. Population.—Broadly speaking, it may be stated that the more recent a village is, the less dense is its population. It is therefore that recently occupied churs are seen to be very thinly inhabited. Habits of that recently occupied churs are seen to be very thinly inhabited. Habits of the people.—Under this head the Deputy Superintendent remarks that, with a few exceptions, the people are abstemious; that the lower classes in almost all the villages are accustomed to manual labour, the tendency of the middle class villagers being towards indolence, which is the characteristic of the upper class. In point of cleanliness the Hindus are in advance of their brethren the Mahomedans. Personal cleanliness is, however, as a rule, pretty well observed by the two upper classes, and even the lower class people are now learning to keep themselves clean, but in some villages in thanas Awnpur, Muksadpur, Madaripur, Kotalipara and Mendigunj the people are still disgustingly dirty in their habits.

Drainage, Water-supply and Conservancy.—The arrangements under these heads are described in Appendix VI to this report. Disposal of the dead.—The Mahomedans generally bury their dead within house enclosures and sometimes on banks of tanks. Public burial-grounds in some shape or other were noticed only in thanas Sabhar, Nabinagar, Brahmanbaria, Kasba, Comillah and Mymensing. The Hindus mostly carry on cremation outside the villages on banks of tanks, khals and rivers. The practice of throwing dead bodies into rivers obtains to some extent in thansa Rupganj, Narainganj and Iswarganj. Food-supply.— There was a good harvest of rice crop almost everywhere. Dâl, fish, milk and vegetables could also be had in quantities sufficient for local demand. General health was on the whole remarkably good. Recommendations.—The Deputy Superintendent offers many which may be summed up as follows:—Encouragement of the removal of unhealthy villages to new sites by offering lands on advantageous terms, reduction or remission of rent, exemption from some of the taxes, &c.; construction of villages on scientific principles; filling up of filthy holes and ditches; improvement of the local water supply by digging or re-digging tanks, reserving them for drinking and protecting them from pollution; removal of jungle where it obstructs air and light, prohibition of burial and cremation within villages and on banks of tanks, and provision of proper grounds for these surposes; attention to general conservancy and provision of public latring. Aunicipal Inspections.—The Deputy Superintendent inspected during the year the following seven municipalities:—Kishoreganj, Bazitpur, Netrokona, Muktagacha, Jamalpur, Madaripur, Jhalokati. A short account of their present sanitary condition will be found in Appendix VI to this report.

	Gya district.				
Thanas.		Nt	Vumber of villages.		
Jehanab a d	•••	•••	77		
Arwal			79 '		
Daudnagar		• • •	62 ·		
Tikari	•••	•••	21		
Utrai	•••		50		
Nawada	•••		60		
Pakriburwan	•	•••	42		
			201		

154. BEHAR CIRCLE.—Assistant Surgeon Mothura Nath Sen, Deputy Sanitary Commissioner.—This officer inspected for sanitary purposes two municipalities and 391 villages situated in the seven thanas of the Gya district noted in the margin. In his report on the subject he has dealt with the sanitary status of each thana separately. A short abstract from the report is given below.

Portions of Jehanabad, Arwal, Daudnagar and Tikari are comparatively higher than the other portions, while Utrai, Pakriburwan, particularly its Pachumba outpost, and the Gobindpur outpost of the Nawada thana abound with hills and hillocks, and are covered with jungles which give shelter to wild animals. These thanas are intersected by rivers and hill-streams, the chief among them being the Sone, the Falgoo, the Poonpoon, the Punchanor, and the Sakri. There are besides several irrigation canals which pass through thanas Arwal and Daudnagor. The villages are mostly situated on raised

grounds, river banks, and hill-sides, and, in some cases in Arwal and Daudnagor, on the sides of the tributaries of the irrigation canals. The dwellings are mostly mud-walled with tiled or thatched roofs. They are in some cases arranged in rows, but are in the majority of instances crowded together and badly ventilated. Their floors are generally dry. Drainage, Water-supply and Conservancy.—The arrangements under these heads are mentioned in Appendix VI to this Report. Disposal of the dead — Cremation is generally carried on on the banks of the nearest rivulet or on any waste land close to the village, and sometimes on the sides of hills. The pauper and the infant dead are always buried. The Mahomedans bury their dead on the outskirts of the village. Food-supply.—There is nothing particular to be mentioned under this head. The lower classes of people generally take one meal at night, and during the day they satisfy their appetite with a bandful of sathoo or chabanny. Clothing .- The people are inadequately and dirtily clothed. General health was on the whole good. Registration was tested in the usual manner. In Gya deaths were enquired into in 172 villages, and omissions to register the events found in 26 of them. Advice to the people.—The efficiency of sanitary reform was explained to the people and the chief sanitary defects were pointed out, but they are quite indifferent to the subject. Recommendations.—The Superintendent suggests that the objectionable practice of promiscuous defeecation should be put a stop to; that one or two wells in each village should be set apart for drinking purposes; that dead bodies should be buried or burnt at a safe distance from the villages, and that pits and holes in the villages should be filled up.

Municipal inspections.—The Deputy Sanitary Commissioner inspected during the
year the towns of Daudnagor and Tikari. The defects that were pointed out by him and his suggestions to improve the sanitation of these places have been sent to the Chairmen of the respective municipalities for necessary action. A brief account of the sanitary condition of these municipalities will be found in Appendix VI to this report.

The post of the Deputy Superintendent of Vaccination for the Behar Circle was created in the year under review and the present incumbent is the first officer appointed to it. He joined the appointment on 2nd November 1887. His sanitary inspections embraced 5 towns and 341 villages situated in thanas Mokamah, Badh, Bankipur, Monair, Fatwa, Hilsa, Alaserai, Silas, Behar and Bikram in Patna, and thanas Arrah, Buxar, Doomraon, Mohaniah, Bhabuah, Bilauti, Peroo, Dhungain, Kargher and Dehri in Shahabad. In the report submitted by him the table showing the number of villages visited in each thana has not been furnished, and he has described the sanitary condition of the two districts as a whole instead of each thana separately.

A short abstract from his report is given below.

The general slope of the Patna district is from south to north, and that of Shahabad from south and west to north and east. Portions of thanas Mokamah, Barh and Monair in the former consist of very low paddy land, and are inundated during the rains when the villages look like small islands, communication from one village to another being then carried on by means of boats. The other portions of the district are comparatively elevated. In Shahabad, paddy and winter crop lands comprise the largest area, the southern part being full of hills and jungles. Thanas Peroo, Dhungain, Sasseram and Dehri are intersected by irrigation canals running in different directions, and are not thoroughly drained. Sub-soil moisture is retained in many places, and the Deputy Superintendent mentions that there was a great prevalence of fever in this part of the district year before last. Dwellings.—In both the districts the houses of the people are mostly kutcha with raised floors and thatched or tiled roofs. They are generally crowded together, and as there are very few windows in them, both external perflation and internal ventilation is altogether bad. The cow-sheds are in most cases very close to the houses, and the animals are sometimes tied at night in the sleeping rooms and in the front verandahs. Roads—The village footpaths are mostly narrow, and serve the purposes of roads, drains and privies. Drainage, Water-supply and Conservancy.—The arrangements obtaining under these heads in the thanas visited during the year by the Deputy Superintendent are described in Appendix VI to this report. Disposal of the dead.—There is no fixed place for carrying on

The Hindoos generally take their dead to the river cremation or burial. Ganges or to the Sone and burn there indiscriminately. Owing to scarcity of fuel uncremated bodies are sometimes thrown into the river after the mouth only of the deceased has been touched with fire. The Mahomedan dead are buried either in house-compounds or in some waste land near the village. The people of both the districts are not only poorly, but dirtily clad, specially the woman. Food-supply.—The principal food of the people consists of sathoo, which is grain fried and then crushed. Almost all are in the habit of taking this food during the day, and a few take rice and dâl at night. Sathoo is very cheap, and at the same time its supply is abundant. General health was on the whole good. Advice tendered.—In many places the Deputy Superintendent tried to make the people understand that want of sanitation is the cause of disease, but they seemed quite indifferent to the matter. Recommendations.— The Deputy Superintendent suggests that the dead should be burned or buried in fixed places at a distance from the houses; that cattle-sheds should be removed from near the dwellings; that the houses should be furnished with windows; that the surroundings of the wells from which drinking water is taken should be kept scrupulously clean, and that the surroundings of the houses should also be kept clean. Municipal Inspections .-During the year under review the towns of Behar, Barrh, Doomraon, Buxar and Sasseram were inspected by the Deputy Superintendent. A short sanitary history of these places will be found in Appendix VI to this report.

ORISSA CIRCLE.—Apothecary P. Vecriah Naidu, Deputy Sanitary

Cuttack di	strict.	Balasore dis rict,							
Thanas.	Number of villages.	Thanas.	Number of villages.						
Cuttack, sudder Jugatsingpur Tirtol Jajpore Dharamsala Salipur Kendrapara Patamundi Aul Banki	29 34 29 16 57 56 57 57 35 20	Chandbally Total Tributary S. Narsingpur Baramba Runpur	11 7 4						
Puri districe Puri, sudder Gop Pipli Khoords Banpur		Total	22						

Total ... 421

Commissioner.—This officer inspected for sanitary purposes 824 villages (against 595 during the preceding year) in the thanas noted in the margin. In his report on the subject he describes the sanitary condition of the several thanas separately. A brief resumé

thereof is subjoined.

With the exception of the villages situated in the low-lying tracts of thanas Tirtol, Dharamsala, Kendrapara and Patamundi in Cuttack, and Gop and Banpur in Puri, almost all the other villages inspected in these two districts are situated on more or less elevated ground. Some of them are surrounded by paddy fields and some by mango topes, and some by low jun-Cocoanut, date-palm and bamboo clumps are plentiful in the majority of the villages in Pipli. Thana Gop

abounds in marshes, and is intersected by tidal rivers which are infested with crocodiles. The interior of this thana as well as the greater portion of Khorda is covered with defise jungle which gives shelter to bears and other wild animals. Besides this, there is nothing peculiar in the topography of any of the other thanas inspected during the year in Cuttack and Puri. Dwellings.—The houses chiefly consist of mud-walled huts thatched with straw, and are in many places grouped together and badly ventilated. The floors of the houses are not, except where the general level of the village is low, subject to ground damp, the accommodation is in many instances insufficient, and overcrowding of inmates occurs at night. The cow and the cattle sheds are mostly built close to the dwelling-houses, and are often kept very dirty. The verandahs and even the sleeping rooms are sometimes used by the poor for the housing of their cattle at night. Roads. - Some villages have roads, but without side-drains. The foot paths are mostly narrow, and serve the purposes of drains, and occasionally of privies too for children. Drainage, Water-supply, and Conservancy.—The arrangements under these heads are narrated in Appendix VI to this Report. Disposal of the dead .- Both interment and cremation are usually carried on at a distance from the villages, in beds of rivers, or in jungles, or on waste In some places in thanas Patamandi and Aul the practice of throwing partially-cremated bodies into the river especially during the floods when fuel becomes scarce, still obains. General health of all the thanas visited, excepting Banki, which suffered severely from an outbreak of cholera, was on the whole good. Registration was tested in the usual manner through the means of chowkidars and respectable villagers. Advice tendered.—Sanitary defects and their probable effect on health were always pointed out to the people, who, it is satisfactory to learn, were in many places prevailed upon to adopt remedial measures. A short account of the sanitary condition of Chandbally in Balasore and of the town of Nursingpur, Baramba and Runpur in the Tributary States, which were visited by the Deputy Sanitary Commissioner, will be found in Appendix VI to this Report.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

The 18th June 1888.

APPENDIX No. I.

VITAL STATISTICS OF THE DISTRICTS OF BENGAL

FOR THE YEAR 1887.

Annual Form No. I.—BIRTHS registered in the Municipalities and Towns in the Districts of the Bengal Province during the year 1887.

1 .	2	3	4		5	1	6		7	8	9
Daniel				1881. 1881. Manuel or or or or or or or or or or or or or		PER 1.	RATIO OF BIRTHS PER 1,000 OF POPU- LATION.			irths ov	Deaths over ber 1,050 of m.
Districts.	Number.	MUNICIPALITIES AND TOWNS.	Population of Census of 1	Male. Female. Total.		Male.	fale.		Number of males horn to every 100 females born.	Exerss of B Deaths per Population.	Excess of I Births per Population
Burdwan	12345678901112111111111111111111111111111111111	Burdwan Aasonsolo Raniganj Kulma Cutwa Dainhat Bankura Bissempore Midnapore Ghattal Tamtuk Chundrakona Ramjibanpore Khorpai Hughli Bansberia Jehanabad Serampore Utterpara Boidobatty Kotrung Jihatdessur Howrah Howrah Boil Bull Bull Bull Bull Bull Bull Bull Bu	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	275 81 158 193 233 193 193 193 193 193 193 193 193 193 1	17 3 40 183 40 41 8 184 186 122 2 205 6855 685 1,387 3,123 1,561 2,18 162 104 118 22	8 *** 66 *** 78 *** 10** 60** 28 *** 10** 60** 28 *** 10** 60** 28 *** 10** 60** 28 *** 10** 60** 60** 60** 60** 60** 60**	5.90 15.46 12.60 15.46 12.60 15.46 12.60 11.35 12.66 1	18'46' 34'44' 27'05' 34'44' 27'05' 18'18' 21'32' 18'38' 19	140 1123 114 115 116 117 117 118 118 118 118 118 118 118 118	11'48	10 880124 7.8.20 8 81852 8 11.25 8 11.
Eurbhangs { Sarun {	78 79 80 81 82	Durbhanga	11,911 53,249 18,807 12,493	230 265 186	03 1 153 3 254 5 178 3	49 7·22 83 4·31 19 19·91	5.28 2.87 10.08 14.24	12.50 7.19 39.00	136 150 104 104	0.84	3 11
Chumparun {	83 84	Motibari	21,263 10,307 57,520	115	119 2 888 1,8	34 11°15 10 16°02	15.43	31. kg	103	• "6.36	8.85
Monghyr	85 86 87 88 89 90 91 92 93 94 95 96 96 96	Moughyr Jamalporo Shaikpura Shaikpura Shaikpura Bhagulporo Purneal English Bazar Shahobganj Cuttack Kendrapara Jaipur Puri Hazaribagh Chattra Ranchi Chybassa Puruha	13,603 12,517 57,413 15,016 12,430 6,512 43,233 15,637 11,233 24,754 15,806 11,900 18,443 6,006	344 169 878 125 08 79 401 256 38 28 278 195 95	357 6 177 3 775 1.6 94 2 52 1 77 1 362 7 389 4 274 3 266 5 184 5 184 5 184 5	41 25.86 41 18.50	24'84 13'74 13'48 6'25 4'17 11'82 8'83 14'65 8'47 7'02 17'37 15'46 3'90 7'15	50°21 27°24 28°73 14°58 9°65 28°95 18°10 6°85 16°85 16°85 80°96 80°96 80°96 80°96 16°85 16	103 113 132 130 102 104 111 104 104 104 131	16'31	14·62 1·74 15·45 24 27·64
		TOTAL FOR THE PROVINCE	2,311,581	23,718	21,024 44,7	42 10.50	9.00	19:35	115		4.46

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,
Sanitary Commissioner for Bengal.

App. I.]

Annual Form No. II — Deaths registered in the DISTRICTS of the Bengal Province during the year 1887.

1	2	3	4	5		6		7		8		9			
	Дівтиість.	according of 1881.	Area in square miles.	Average Population per square mile,		BER OV D		f males died 100 deaths	RATIO 6 1,000 0	P DEAT	THS PER	PER	MEAN EATIO OF DEAT. PRE 1,000 DURING PREVIOUS FIVE YEARS.		
Number,	District.	Population to Census	Area in squ	Average per squar	Male.	Female.	Total.	Number of r	Male.	Female.	Total.	Kale.	Female.	Total.	
1 2 3 4 5 6	Burdwan Division. Burdwan Bankura Birthum Midnapore Hughli Berampore	1,391,828 1,041,752 794,428 2,515,665 603,050 351,955	- 2,697 2,621 1,756 5,082 880 343	510°06 597°48 452°40 494°99 753°46 1,0£6°11	14,145 9,019 10,810 29,143 7,205 3,587	12,901 7,605 10,358 26,281 6,679 2,979	27,046 16,624 21,168 55,424 13,894 6,566	109 118 104 110 107 ,120	21°16 17°78 28°33 28°44 22°82 20°57	17.83 14.22 25.08 20.65 19.22 16.77	19'43 15'05 26'64 22'03 20'93 18'68	29·18 23·04 29·01 22·18 24·29 21·40	25'96 19'38 25'18 19'04 20'70 17'91	26:47 21:17 27:02 20:50 22:45 19:64	
	Total of Hughli, includ- ing Serampore	1,015,005	1,223	820.93	10,792	9,658	20,450	111	22'02)	18:39	20.14	23-26	19.81	21.4	
7	Howrah	635,381	476	1,334'88	7,048	5,634	12,682	125	22.27	17:66	19-93	20.71	16.79	18.7*	
s{	Presidency Division. 24-Pergunnahs, exclusive of Suburbs of Calcutta Suburbs of Calcutta	1,618,420 251,439	2,097	771 '78 10,982 '18	19,681 -6,181	16,249 4,424	35,929 10,605	121 139	23°76 41°98	20°56 42°44	22°20 42°17	21'28 43'94	18·10 43·78	19:73	
	Total of 24-Pergunnahs	1,860,859	2,120	882.00	25,862	20,672	40,534	125	20.21	23.11	24.884	24.70	21.10	22.98	
9 10 11 12	Nudden Jossore	1,655,721 . 1,939,375 1,226,790 1,079,948	2,755 2,925 2,144 2,077	600°PS 668°05 572°20 519°96	23,994 21,603 18,038 12,669	20,507 -18,028 16,134 11,588	44,591 39,625 31,172 24,257	*. 116 119 111 109	20·77 22·52 30·75 22·28	24·23 18·38 25·19 22·65	26°03 20°43 27°85 22°46	42.06 28.01 29.49 23.05	33:11 23:00 22:40 23:00	37:46 25:48 25:79 23:07	
	Rojshahye Division.	•													
13 14 15 16 17 19	Dinajpur	1,514,546 1,338,658 2,007,004 734,358 1,311,728 156,137 581,562	4,118 ,2.361 8,486 1,408 1,817 1,234 2,884	867°74 566°98 601°83 490°23 710°19 126°53 201°65	26,502 28,013 83,517 10,991 18,991 2,522 10,184	22,543 20,688 29,673 9,694 15,223 1,908 9,073	49,045 43,701. 62,190 20,685 84,214 4,430 19,257	117 111 116 113 124 132 112	83 87 84 85 81 39 29 49 29 29 28 21 33 32	30*79 30*49 27*88 26*80 22*94 24*58 32*87	52:38 52:64 20:64 28:10 26:08 28:37 33:11	22:45 34:17 23:40 26:53 80:97 15:79 24:20	17°79 27'86 10'85 23'18 25'55 13'84 21'60	20°20 30°96 21°65 24 % 24°23 14°46 22°96	
	Dacca Division.		1	• .		. *				•					
20 21 22 23	Dacea Farnipore Hackerganj Mymensing	2,116,350 1,631,734 1,900,889 3,051,966	2,797 2,267 8,649 6,287	756°65 719°78 520°93 485°44	25,049 13,043 30,132 27,133	* 20,328 16,686 29,114 21,759	48,877 23,742 59,216 48,892	113 121 103 124	22·29 16·18 30·95 17·46	18.77 12.95 - 31.30 14.51	20:49 14:55 31:16 16:01	23'43 17'48 26'66 14'46	19:36 14:03 25:55 11:90	21:35 15:72 26:12 13:20	
	Chittagong Division.						75.00.				•				
24 25 26	Chitingong Noakhali Tipperah	1,132,841 820,772 1,519,388	2,567 1,641 2,401	441·11 600·17 600·93	9,056 9,214 16,251	8,258 9,139 14,228	17,314 18,353 30,479	109 100 114	17:03 22:18 21:08	13:74 22:63 19:01	22:36 20:06	18:53 20:41 17:22	14.80 19.61 14.89	16:45 20:02 16:12	
27 28 29 30 31 32 33	Patna Division. Patna	1,756,856 2,124,682 1,964,009 2,582,060 2,633,447 2,280,392 1,721,608	2,079 4,912 4,305 3,003 3,335 2,622 3,531	845°05 450°91 450°15 859°85 789°61 869°71 487°57	28,871 30,428 33,508 38,343 21,639 20,811 23,992	21,430 \$5,099 28,570 14,010 17,771 21,134 19,117	44,801 71,527 62,103 52,362 39,410 47,445 43,109	109 103 117 130 121 124 125	27·21 84·91 85·35 14·49 16·69 24·28 27·55	23:88 32:45 28:69 10:65 13:28 17:65 22:46	25:50 88:66 81:60 12:53 14:06 20:80 25:08	27:29 25:24 25:05 17:86 16:29 22:43 10:08	23-26 22-27 20-64 13-14 12-84 15-56 16-25	25°23 23°73 22°77 15°45 14°54 18°82 18°18	
	Bhagulpore Division.	1													
34 35 36 37 38	Monghyr	1,969,774 1,946,158 1,848,687 710,448 1,568,098	3,921 4,268 4,956 1,891 5,456	502:37 • 460:67 873:02 375:70 287:41	\$6,280 20,803 20,945 11,607 13,854	33,278 26,088 17,406 9,168 11,071	69,567 85,891 89,851 20,778 24,925	109 114 120 126 125	37:44 80:43 23:85 33:44 17:64	33·25 26·43 19·09 25·22 14·14	35°31 28°42 20°74 29°24 15°88	22°18° 25°10 21°78 22°66 15°92	18:50 21:49 17:67 16:71 12:54	20-35 23-29 19-77 19-62 14-23	
39 445 41	Orisea Division. Cuttack Pur Balasoro	1.795,965 848,487 945,280	8,638 2,473 9,006	494:09 359:27 487:54	17,212 14,973 11,672	16,718 14,685 11,100	33,930 29,658 22,772	103 101 105	19·61 33·52 25·29	18·22 83·23 22·94	18:90 93:38 24:09	21·13 23·10 26·77	18·72 21·47 28·53	85.11 85.55 18.8u	
42 48 44 45	hota Nagpore Division. 191 uribage	1,104,742 3,809,244 561,964 1,058,228	7,021 12,045 4,336 4,147	157:35 133:60 129:60 255:18	15,163° 21,902 5,220 10,232	13,854 19,285 4,349 8,339	29,017 41,247 9,669 18,571	109 113 120 122	27:82 27:56 18:57 19:47	24·74 23·73 16·47 15·64	26:26 25:63 17:02 17:54	20°15 17°88 10°39 10°23	17:84 15:07 13:24 13:23	16:73 16:40 14:82 14:71	
	TOTAL FOR THE PRO-	66,163,884	144,863	450.73	929,330	723,198	1,552,528	114	25.52	21.69	23.46	22.86	19.08	20.98	

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 2nd March 1888.

· R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

Annual Form No. III.—Deaths registered in the Districts of the Bengal Province during EAOH MONTH of the year 1887.

1	2								3			•			4
Namber.	Districts.		January.	February.	March.	April.	May.	June.	July.	Angust,	September.	October.	November.	December.	TOTAL DRAIRS REGISTERED DU- BING THE ISAR,
1	Burdwan Divisio	.	1		1	• 1	1		i	. • 1	·	i		ì	
1 2 3 4 5 6	Burdwan Bankura Birbhum Midnapore Hughli		2,660 1,486 1,926 5,352 1,661 816	1,958 1,531 1,546 4,357 1,238 598	2,182 1,513 1,816 4,657 1,268 567	2,330 1,316 1,534 4,068 1,084 580	2,009 1,396 1,459 3,965 878 441	1,474 1,114 1,222 3,150 651 302	1,700 1,251 1,486 4,205 735 818	2,227 1,568 1,625 4,605 876 453	1,869 - 1,127 1,388 4,072 869 474	9,578 1,405 1,985 4,783 1,328 602	2,646 1,639 2,397 5,520 1,552 696	3,204 1,478 2,634 6,670 1,740 719	27,04 16,62 21,16 55,42 13,68 6,56
ı	Total of Hughli, in Serampore	cluding	2,477	1,836	1,835	1,668	1,319	953	1,958	1,329	1,543	1,980	2,248	2,459	20,45
<i>;</i>	Howrah		1,534	948	880	868	729	591	597	1,046	889	1,284	1,502	1,814	12,68
	Presidency Divisi	iane	1	- 1	i	I	•			1	İ				
٤٤	24-Pergunnahs, exclu Suburbs of Calcutta	sive of	* 4,760	2,757	2,725	2,599	2,144	1,619	2,024	2,618	2,405	3,898	8,949	4,931	35,99
٦,	Suburbs of Calcutta .	··· ···].	1,053	815	862	993	784	492	678	718	804	886	1,182	1,363	10,60
	Total of 24-Pergunnal	ns -	5,813	3,572	8,587	8,592	2,928	2,111	2,702	3,331	3,209	4,204	5,181	6,294	48,55
9 0 1 2	Jessore Murshidabad		4,062 5,248 2,798 8,417	2,776 2,664 1,892 1,890	2,900 2,913 2,285 1,684	3,437 4,072 8,209 1,960	4,103 8,143 2,358 1,430	2,362 1,999 1,623 1,136	2,053 1,942 1,865 1,262	3,278 2,195 2,498 1,463	3,050 2,389 2,833 1,709	4,835 8,428 4,378 2,240	0,162 4,496 4,750 2,908	4,973 4,996 3,683 3,158	44,58 39,69 34,17 24,25
	Rajshahye Divisi	on.			I	İ			- 1	1	ļ	1			
3 4 5 6 7 8	Rajshahye Rungpur Bogra Pubna Darjiling		5,461 5,417 7,536 2,370 3,021 313 1,679	3,664 3,089 4,800 1,554 2,732 300 1,479	3,755 2,594 4,902 1,397 2,531 293 1,642	4,239 . 3,110 6,287 1,565 4,985 357 1,989	8,700 8,834 5,292 1,751 3,578 428 2,112	2,884 2,576 3,909 1,194 2,042 477 1,676	3,055 2,604 3,924 1,361 1,910 439 1,284	3,220 3,119 3,593 1,538 1,942 434 1,023	3,364 2,950 3,345 1,416 1,654 358 890	5,415 4,953 4,913 1,996 2,969 340 1,720	5,040 4,811 6,678 2,099 3,321 300 1,767	5,228 4,635 7,010 2,435 3,850 391 1,996	49,04 43,76 62,11 20,63 34,2 4,4 19,2
	Dacca Division	. l					}	•						j	
20 21 22 23	Faridpore Backerganj		8,069 8,559 8,061 6,185	3,788 1,915 4,753 3,975	3,191 1,542 6,192 3,314	4,210 3,753 7,594 4,211	3,906 2,497 4,514 4,216	2,108 1,242 3,003 8,541	1,990 1,417 2,937 8,725	2,098 1, 221 2,915 3,566	2,193 909 2,985 2,891	3,361 1,793 4,417 4,146	4,374 1,790 5,829 4,673	4,699 2,104 6,046 5,499	43,3' 23,7 59,2 48,8
	Chittagong Divis	ion.				-		•						1	
14 15 16			1,576 2,184 4,207	1,251 1,569 2,590	1,225 1,540 2,246	1,345 1,744 2,583	1,482 1,575 2,311	1,173 1,406 1,840	1,399 1,870 2,188	1,617 1,196 2,161	1,284 1,126 1,859	1,429 1,298 2,482	1,627 1,593 2,779	1,906 1,802 8,238	17,8 18,8 80,4
	Patna Division	n.								•					
17 18 19 10 11 12	Patna		2,842 8,455 4,469 2,547 2,661 2,798 2,574	2,000 2,515 2,645 - 1,642 2,205 2,532 1,787	1,830 8,467 2,749 1,743 2,080 2,480 2,088	2,454 3,904 5,397 2,008 2,802 2,835 2,774	4,050 9,903 4,540 4,639 4,022 3,836 9,060	3,626 7,211 5,714 3,640 4,210 4,495 6,475	7,474 11,273 11,798 3,350 4,460 7,305 3,843	6,956 10,984 8,668 3,213 3,591 7,444 3,601	4,209 5,720 5,870 2,505 8,365 4,396 2,815	3,819 5,228 4,853 2,471 3,383 3,440 2,766	3,098 4,016 4,747 2,521 3,513 3,419 3,008	2,403 5,256 2,853 2,085 3,132 2,515 2,318	44,8 71,6 62,1 32,3 89,4 47,4 43,1
	Bhagulpore Divid	sion.													
34 35 36 37 38	Monghyr Bhagulpore Purneah Maldah		4,808 4,186 3,711 1,684 1,818	3,836 8,106 2,837 1,082 1,504	3,575 3,572 2,702 1,085 1,769	4,798 4,820 3,106 1,674 2,323	8,211 5,707 2,837 1,415 2,276	6,014 4,522 2,280 201 2,308	6,621 4,692 2,080 1,029 2,462	7,979 4,872 2,074 1,337 2,578	5,955 4,728 2,289 1,685 2,124	6,625 5,390 3,919 2,809 2,029	6,595 5,407 5,041 3,178 1,896	4,985 4,799 5,475 2,846 1,843	69,5 55,8 38,3 20,7 24,9
	Orisea Divisio	78.									1				
19 10 11	Quttack Puri Balasore	···	3,549 . 2,889 2,749	8,144 2,819 1,907	8,131 2,629 2,036	2,643 2,228 1,833	2,315 2,123 2,024	1,815 2,828 1,562	3,012 4,808 3, 052	3,077 2,478 1,780	2,585 1,629 1,484	2,481 1,598 1,535	2,929 2,179 1,888	3,240 2,450 2,028	33,9 29,6 22,7
	Chota Nagpore Div	rision.					<u> </u>						B #01	a 90a	an a
12 13 14 15	Hazaribagh Lohardugga Singbhum Manbhum		1,824 1,539 739 1,265	1,517 1,664 1,09 1,111	1,728 2,429 771 1,387	2,260 2,531 743 1,762	2,608 8,172 799 1,858	2,279 3,656 821 1,454	3,079 5,745 865 1,980	3,212 6,452 960 2,035	2,725 4,843 872 1,693	2,696 3,937 685 1,335	2,701 2,850 797 1,335	2,388 2,429 818 1,856	29, 41, 9, 18,
	TOTAL FOR THE PROV	TINCE	148,714	101,811	105,767	126,348	140,829	112,612	137,112	188,079	112,624	135,326	147,957	145,349	1,582,6
	BATIO OF DEATHS P. OF POPULATION A MONTH	BE 1,000 W BAÇH	3'24	1.23	1.20	1*90	2.13	1.70	2:07	2.08	1.40	2.04	2.53	2.19	28

Office of the Sany Commr. for Bengal,

The 2nd March 1888.

B. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

ANNUAL FORM No. IV.—Deaths registered according to AGE in the Districts of the Bengal Province during the year 1887.

1	2		3 .		4		5		6	Ī	7		8	Ī	9		10		11	1	2
	Districis.		DER 1 BAR.	UNI	AND OLE 5 ARS.	חאש	AND ORR 10 ARS.	UNI	AND DER 15 SARS.	UN	AND PER 20 EARS.	UNI	AND DER 30	UNI	AND ER 40 ARS.	LMI	AND ER 50	UNI	AND PR 60 Aks.	A	PARS ND ARDS,
Namber.		Male.	Female.	Male.	Remale.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Pemale.	Male.	Female.	Male.	Pemale.	Male.	Female.	Male,	Female.
1 2 3 4 5 6	Burdwan Division. Burdwan Bankura Bribbum Midnspore Hugbii Sorampore	2,405 1,657 2,843 4,787 1,049 577	1,359 2,388 4,054 897	810 1,410 8,027 652	1,271 840 1,458 3,131 643 370	922 705 1,011 1,946 416 250	869 572 818 1,725 410 197	413 444 1,373 264	281 328 824 186	423 1,480 841	443 532 1,253 390	1,083 918 3,236	900 1 045 3 3,240 1,020	1,097 1,027 3,478	787 963 2,904 740	915 1,015 8,280 998	701 828 2,457 742	1,364 876 802 2,728 730 869	1,202 768 956 2,360 629 800	1,592 924 863 3,913 848 512	1,86 95 1,04 4,32 1,00
7	Total of Hughli, including Serampore	1,627	_	-!	1,013 782	483	687 401	300	-	~ ·	-	-		·	-	·	-	1,099	929	1,300	1,47
8	Presidency Division. 24-Pergunnahs, exclusive of Suburbs of Calcutta Suburbs of Calcutta Total of 24-Pergunnahs	2,698 921 3,619	771	2,750 588 3,338	2,506 604	2,094 298 2,392	1,585 204 1,789	1,164	820 120	1	202	1,118	618	1	507	1,783 625 2,408	326	1,513 454 1,967	1,273 364 1,637	2,883 546 2,879	2,02
9 10 11 12	Nuddea	3,903 7,526 2,576 1,706	3.058 1,391 2,119	4,130 2,752 2,858	4,004 2,669 2,856 1,680	3,119 2,702 2 162 1,229	2,5°C 1,85°C 1,75% 963	1 974	1,132 1,001 726 434	1,045 1,178 993	887 1,168 717	1,917	1,789 2,435 1,653	2,001 2,498 1,758	1,493 2,030 1,386	2,045 2,375	1,565 1,609 1,306	1,454 1,808 1,245 919	1,526 1,474 1,259 701	2.4/8	2,81 2,45 2,81 1,64
18 14 15 16 17 14	Rajshahye Division, Dinajpur	3,646 2,486 3,748 1,837 1,457 310 1,831		3,304 3,960 3,905 1,773 3,1 c 388 1,429	3,046 4,011 8,502 1,748 8,611 865 944	2,143 3,309 2,895 1,033 3,071 206 682	1,578 2,442 2,049 782 2,150 142 538	1,653 1,815 1,815 1,913 542 1,725 143 570	1,150 1,122 1,282 • 365 960 96 470	1,249 1,667 503 1,159 142	1,369 1,801 655 992 120	4,270 1,228 1,932 443	2,588 4,946 1,245 1,749 318	5,106 1,276 1,958 402	3,124 2,105 4,169 1,003 1,380 253 1,232	2,074 4,048 1,027 1,629 200	1,782 2,987 751 1,037 124	1,815 1,241 2,646 801 1,097 146 958	1,481 1,237 2,087 681 934 126 780	1,808 1,595 3,407 971 1,850 142 720	1,56 1,73 2,85 83 1,81 10 61
20 21 23 23	Dacca Division. Dacca	8,467 1,028 6,610 2,776	2,638 802 5,567 2,051	3,521 1,786 4.707 8,701	3,204 (1,596 4,533 3,127	2,139° 1 122 2,723 2,821	1,735 917 2,359 1,740	1,298 915 1,956 1,426	859 561 1,014 970	654 910	753 1,444	2,198	1,503 3,681	,1,629 2,673	1,303	1,425 2,460	836 1,876	1,686 1,279 2,265 2,234	1,319 842 1,835 1,650	3,402 1,872 4,327 3,720	3,37 1,58 4,03 3,10
24 25 20	Chittagong Division. Chittagong	929 1,919 2,823	1,582	1,180 1,706 1,96'	1,122 1,752 1,848	649 605 1,199	552 632 1,070	377 360 ⊮11	285 258 630		399	567	984	1,191 098 1,695	905 814 1,428	689	565	820 760 1,220	680 693 906	1,506 1,634 2,670	1,65 1,46 2,81
27 28 29 30 31 32 33	Patna Division. Paina	4,696 6,151 4,670 864 1,444 4,054 2,659	3,984 5,282 3,826 705 1,246 2,808 2,060	4,295 6,829 5,771 2,208 3,333 4,617 3,708	6,499 5,384 1,895 3,070 3,765	3,098 2,876 1,690 2,200 1,844 1,989	2,352 1,905 1,176 1,646 1,820	1,319 1,078 1,221 1,233	828 577 700 848	1,812 1,157 900 1,025	1,278 888 563 698 845	8,428 8,685 2,503 2,657 2,657	8,863 3,112 1,840 2,267	3,678 2.487 2.811 2.703	8,466 2,816 1,694	3,547 3,192 2,319 2,435 2,565	3,32f 2,326 1,637 1,814 1,860	2,248 3,036 2,517 2,151 2,000 2,078 2,111	2,120 3,112 2,202 1,824 1,799 1,965 1,786	2,820 3,960 4,728 2,134 2,513 3,517 2,637	3,30 '4,57 5,27 2,10 2,42 3,56 2,68
34 35 36 37 38	Bhagulpore Division. Monshyr	8,194 4,940 1,756 1,125 2,068	7,431 4,254 1,466 917 1,729	8,034 5,498 2,544 2,168 2,636	5,219 2,308 1,934	3,176 2,536 1,802 1,649	1,814 1,428 1,141	1,670 1,447 1,327 867 903	1,228 975 877 441 650	1,088 1,403 1,184 221 750	1,00±	8,518 3,037 1,175	2,530 8,148 2,546 966 1,264	3,286 3,628 1,185	2,536 2,709 778	2,907 2,866 2,596 922 1,054	2,866 2,073 1,884 602 668	2,726 2,168 1,673 880 763	2,616 2,311 1,670 579 503	3,205 2,142 1,546 1,163 1,372	3,99; 2,47 1,63 1,33; 1,23;
39 40 41	Orissa Division. Cuttack Purt Balasore	8,511 8,190 2,548	3.£84 3,084 2,240	2,257 1,710 1,382	2,348 1,878 1,372	1,256 1,132 761	1,004 1,103 600	657 .024 510	545 409 358	705 664 568	995 819 592	1,540 1,525 1,200	1,639 1,557 1,150	1,902 1,586 1,415	1,420 1,277 1,136	1,503 1,876 1,1 4 1	1,087 944 803	1,489 1,206 935	1,37 † 1,114 809	2,853 1,960 1,412	2,98 2,45 1,93
49 43 41 46	Chots New ore Division, Hazardegi, Lobardugga Smethum Mundhum	3,077 3,276 895 1,612	2,770 2,895 739 1,270	2,969 4,293 7-96 1,483	3,781 2 732		1,063 1,629 440 838	759 1,350 271 664	#81 939 214 400	472 1,051 278 683	443 925 940 520	1,258 2,806 471 1,017	1,082 2,171 371 823	1,548 2,320 401 969	1,208 2,057 328 636	1,261 1,060 607 888	966 1,593 378 552	1,297 1,599 439 885	1,400 1,574 391 871	1,255 1,583 538 983	1,68: 1,77: 56! 96!
		123,391 160·14	182:20	125,624 31°89	18,180 7: 27.67 1			5,050 12.00	,	38,014 15°31		88,342 17:02				81,450 25°23	59,975 18 91	65,783 34:94	58,408 28'79	98,307 58'99	90,400

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 2nd March 1888.

Annual Form No. V.—Deaths registered according to CLASS in the Districts of the Bengal Province during the year 1887.

÷			_,															3 000	
		Рог	ULATION A	CCOMPING	TO UT	ENSUS OF	1881,	N	UMBER (PF DEAT	HS RI	GISTER.	р.	ITAM		DEATH		1,000	
	Districts.	Christians.	Hindus,	Mahomedans.	Buddhists.	Other classes.	'Fotal,	Christians.	Hindus,	Mahomedane,	Buddhists.	Other classes.	Total.	Christians.	Hindus,	Mahomedans.	Buddhists.	Other classes.	Total.
	Burdwan Division. Burdwan Bankura Birbhum Midnapore Hughli Serampore	910 56 48 740 290 365	1,120,676 910,845 017,310 2,233,300 533,033 292,174	263,816 46,274 162,621 164,001 129,702 59,048	36 283	84,677 14,440	1,391,823 1,041,752 704,428 2,515,565 663,050 351,955	10 3 1 14 4 5	21,854 15,033 16,884 40,550 10,948 5,452	5,179 725 4,164 8,411 2,932 1,104		5 863 429 2,440	16,624 21,168 55,424 13,884	63:57 20:83 18:91 15:79	20.27 50.84 50.27	19:63 15:64 25:54 20:79 22:60 20:28	2	0.20 9.69 0.76	19:4 15:0 22:0 24:9
	Total of Hughli includ- ing Serampore	658	825,207	188,800	290	. 58	1,015,005	9	16,400	4,041	,		20,450	18:74	19'87	21.40	_ -	_	50.1
١	Howrah	2,051	500,870	132,118	37	305	635,381	8	9,839	2,835			12,682	8.90	19'04	21.45			19:
	Presidency Division. 24-Pergunnahs, exclusive of Suburbs of Calcutta. Suburbs of Calcutta	9,928 4,048	1,003,110 149,930	604,723 96,583	230	429 751	1,618,420 251,489	184	22,238 6,508	18,507 3,831	3		35,92 9	18:53 50:14	22·16 43·80				22·
l	Total of 24-Pergunnahs.	13,976	1,158,040	701,806	857	1,180	1,869.859	347	28,806	17,338	3		46,534	27:69	24.08	21.72	8.40		24
	Nuddea Jessore	6,422 492 470 747	727,890 768,322 634,796 528,657	921,395 1,170,505 589,957 555,544	1 "1 ""	18 56 1,566	1,655,721 1,939,875 1,226,790 1,079,948	189 19 5 45	18,470 15,415 17,018 11,150	25,933 24,191 16,247 13,062		7	44,591 89,625 84,172 24,257		\$4.51 :	29.14 20.06 27.53 23.51		4.46	26 20 27 22
	Rajshahye Division. Dinajpur	457 121 80 27 114 1,800	718;630 288,749 816,532 140,860 861,479 126,717 867,891	795,824 1,040,700 1,279,605 593,411 949,508 8,204 208,513	55 60 2 1 18,775 486	1,485 13 1,681 58 296 641 4,518	1,514,346 1,338,688 2,067,964 734,358 1,311,728 156,137 581,502	4 ₁ ₁ 15 4	22,387 •7.952 23,827 3,500 9,006 8,874 11,743	26,484 55,747 38,343 17,015 25,117 207 7,287	201	220 19 43 223	49,045 43,701 62,190 20,65 84,214 4,430 19,257	8:75 11:02 8:77 8:33 25:15	27:58 29:18 25:48	29°96 28°80 26°14	16.49	11 ² 80	32 32 21 24 24 28 33
	Dacca Division.	8,799	858,480	1,250,687	49	135	2.116,850	158	17,421	25,803			43,377	17:38	20.33	20.22			20
	Faridpore Backerganj Mymensing	2,741 8,717 151	653,192 624,597 967,855	974,983 1,267,694 2,038,505	4,797 	5 84 25,955	1,681,734 1,960,889 3,051,966	27. 74 5	• 9,755 16,500 16,300	13,960 42,655 31,945	"i7	582	23,742 50,246 48,802	9°85 19°90 33°00	26.41	14°31 33°64 15°67	3.24	:::	14 81 16
-	Chittagong Division. Chittagong Noakhalı Tipperah	1,055 588 199	275,177 •211,476 511,025	- 801,986 608,592 1,007,740	54,110 114 374	13 2 **	1,132,341 820,772 1,619,388	16 18 4	4,122 4,081 10,550	12,294 14,259 19,925	882 		17,814 18,853 3 0,479	22.10	14:97 19:29 20:64		16:30		1 5 22 20
	Patna Division. Patna	2,588 96 276 372 325 282 1,936	1,541,061 1,891,484 1,817,881 2,265,580 2,323,979 2,010,958 1,476,985	218,141 235,698 146,732 316,308 308,985 269,142 242,687		68 4 30		12 2 5 2 4 66	40,111 64,803 57,768 28,678 35,461 42,288 37,717	4,678 7,664 4,333 8,084 3,944 6,153 5,826	·	3 	44,801 #1.527 62,103 32,362 39,410 47,445 43,109	6.19 14.18	33.76 31.77 12.65 15.25	11.64 12.76 19.01		 16.98	2/ 33 31 11 12 2/
i	Bhagulpore Division.			•															
	Monghyr Buguipore Purneah Maldah Sonthal Pergunnahs	1,091 578 327 26 3,057	1,774,013 1,764,304 1,076,539 379,153 847,590	187,517 185,533 771,139 329,525 108,899	 182	15.748	710,448	27 8 1 14	68,948 51,743 28,361 10,849 15,275	5,592 4,137 14,989 9,882 2,285		7,351	69,567 55,891 38,351 20,775 24,925	13.84 3.05	21.70	29:82 29:98 29:98 20:98	: : :-:	-19 25-22 12-08	
	Orissa Division.																		
	Cuttack Puri Balasore	2,342 819 815	1,744,227 873,664 915,792	47,829 14,008 23,804	4	954 1 4,865	888,487	18 13 8		617 309 409		69	83,930 29,658 22,772	15'87	19.08 83.57 24.683			14 18	3 2
	Chota Nagpore Division. Hazaribagh	552	924;811	106,097		78,282		5	28,055	2,043		8,814	29,017		24.03			45.22	
	Loharduges Singbhum Manbhum	36,281 2,988 552	868,842 855,046 946,247	77,103 3,282 45,453	1 23	626,717 648 65,953	1,609,244 561,964	312 19 6	9,487	2,717 49 758	:::	19,354 14 1,093	41,247 9,560 18,571	6.35	17:09	14.92	::: 	30°88 21 60 16°57	1
	TOTAL FOR THE PRO-	191,884	42,053,029	21.361.957	79,721	1.067.295	66,163,884	1,529	1,006,878	507.355	1,195	36,074	1,552,52	15.00	23.4	2 23.75	14.58	21.03	1

OFFICE OF THE SANY. COMME. FOR BENGAL,
The 2nd March 1888.

B. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the

1				2		-				3	•		6	7
		• D182	RICTS	AWD	Town	18.				Popula tion according to Cenaus of 1881.				ainto.
				•					•	pulstion a	Cholera:	Small-pox.	Fever.	Bowel-complaints.
		•			•		•			80.	1 5	. 2	8	Ä
			DI: Burdu	STRIC		n,				•	·			
8	Burdwan	***	•••	٠		•••		•••	•••	1,335,905 969,106	438 259	17	20,707 12,128	87 29
	Bankura Birbhum Midnapore	•••	•••	•••	•••	•••		:::		786,580 2,446,201	\$67 • 3,830	12	15,668 39,240	19 8,49
	Hughli Serampore	•••	***	•••	•••	•••	·	•••	•••	613,825 305,231	364 323	1	9,603 3,414	1,08 68
		Æ0	tal of	Hughl	li i ncl t	ıding	Seram	pore	•••	919,056	687	1	13,017	1,60
,	Howrah .	•••	•••	 i	•••	•••	•••	•••	•••	529,753	893	7	5,686	1,8
	24-Pergunnahs		Presid	_	Divisi		•			1,424,329	4,162	11	23,894	1,29
3	Nuddes Jessore			•••	•••	•••	•••		•••	1,560,321 1, 9 30,880	2,595 3,042	• 19	35,478 38,826	1,20 24 11
1	Murshidabad Khulna	•••	•••	•••	***	***		•••	•••	1,143,106 1,065,032	1,470 2,244	11 ,1	27,188 18,774	20
		į	Rajsh		Divisi	o n ,								
8	Dine jpur Rajshahye	•••		•••	•••	•••	•••	•••	•••	1,501,786 1,318,847	646 . 474	18 4	45,098 40,545	21 8
5	Rungpur Bogre	•••		•••	•••	•••	•••	•••	:::	2,084,644 728,179 1,275,424	3,948 92 , 1,064	20	54,152 18,276	35 2 15
	Pubna Darjiling Julpaig ar i	•••	•••	•••	•••	•••	***	•••	•	1,275,424 148,161 573,615	1,000 16 1,245		30,559 2,913 16,789	15 78 7
		•••		a Div			•					_		
	Dacca Faridpore	·	***	***				•••	:	2,023,628 19621,471	5,596 5,220	. 12 . 36	27,425 16,024	2,34 40
	Backerganj Mymensing	***		•••	•••		•••	•••		1,847,703 3,004,853	8,817 3, 859	167 59	33,426 36,324	67 1,58
		•	hittag		Divisi									_,,,,
	Chittagong Noakhali		•••	•••			٠			1,110,211 815,648	1,368 487	1 27	12,286 14,280	. 68
3	Tipperah	::		•••	•••	•••	•••	•	•••	1,488,289	2,922	. 24	18,727	1,04
	77-4			a Die	piaion.				•	1,471,813	4,861	100	B4 700	0 ~
7 8 9 0	Patna Gyn Shahabad	•••	•••	•••	•••		•••	•••	:::	2,038,691 1,885,941	16,415 13,398	155 276 119	24,7 69 41, 972 39,848	2,71 1,03 82
ı	Mozufferpore Durbhanga				•••	•••		•••		2,490,715 2,567,351 2,201,333	7,046 5,741	117 148	18,205 27,019	1,14 1,79
2	Sarun Chumparun	•••	1	···	•••	•••	•••	***		2,201,333 1,700,845	7,677 12,804	197 608	16,901 22,740	8,32 27
		E	}hagul	pore i	Drussi	Bu.				 -				
5	Monghyr Bhugulpore Purnesh	•••	••••	•••	•••	···	***	•••	:::	1,886,174 1,988,705 1,833,671	6,537 4,117 1,560	79 8 22	49,931 41,671 35,020	64 92
3	Maldah Sonthal Pergun	nahs	•••	•••	•••	•••	•••	•••		698,018 1,500,088	762 · 596	22 1 5	35,020 19,046 21,384	18 4 31
				a Div				•					,	31
3	Cuttack Puri		•••	•••		•••	•••			1,724,896 863,703	4,511 8,252	660 235	15,139 3,6⊌3	8,74 3,08
	Balacore	•••	•••	•••	•••		•••	·. :	:::	925,015	4,232	322	7,982	4,20
	Hazaribagh		ota N	agp ą r 	e Div					1,089,436	. 899		23;357	81
	Lohardugga Singbhum		•••		•••	•••	•••	•••	<i></i>	1,590,801 555,958	9,36 2 153	64	20.577 6,752	3,11 80
5	Manbhum	•••	•••	•••	••• Dom • =	 TOTA	 Distr		,•••	1,048,924	164,863		1,002,573	- 84
			7	NWO		BOR.	DIGIR	ICIB			109,003	8,515	1,002,073	48,48
			Burde	oan D	istric	t.	•.	•				•		
	Burdwan Kalna Rapiganj	•••	•••	•••		•••	•••	•••	•••	34,080 10,901 10,937	65 10 35	1	447 117 184	8 2 5
					 Distri		•••	•••	-"	-0,001		*	101	
	Bankura Bishenpur	•••	•••	•••	***	•••	.			18,747 21,268	19 21	*****	124 156	8
	Sonamukhi		***	•••	***	***	•••	•••	==	12,616	8	******	103	1
.1	9		Birbh		istrici	;.	• ,			= 0.45	_			
'	Soori	,	 Kidnaj	 oora I	 Hetmi	*** *£	,	•••		7,848	1	•••••	25	
,	Midnapore			ore 1						23,560	32	•	236	14
	Ghataí Chandrakona	•••	•••	***	•••	. •••	***	•••		12,638 12,257	44	*****	101 155	
•	Ramjibanpur	••) Inco	 Lli Di	 etrict		•••	•••		10,909	. 7	•••••	132	9
2	Hughli	•••	****			•	•••			88,718	82	1	585	26
3	Jehanabad Serampore Baidyabatti	•••	•••	•••	•••	•••	•••	•••	=	10,507 26,496	142	******	42 316	. 22
5	Januar Maria Utali			***	***	***	***		•••	14,718	10	•••••	90	2

Districts and Principal Towns of the Bengal Province during the year 1887.

		8			9	10					11				19
		INJUI				ALL	R	ATIO	OF DEAT	HS PE	R 1,000	OF POI	ULATI	ON.	
Svic	IDB.	ats.	ed by			FROM				٠		·	FROM		
Male.	Female.	Wounds or Accidents.	Snake-bite or killed Wild Beasts.	Total,	. All other causes.	TOIAL DRATES FROM CAUSES.	Ćholera.	. Small-pox.	Perer.	Bowel-complaints.	Injury.	All other causes.	For the year.	Mean of previous five years.	Number.
\$1 10 10 18 10 7	33 13 16 16 19 6	79 76 109 303 108 30	* 118 104 88 400 98 48	- 251 208 223 827 230 91	4,038 3,079 4,747 6,720 1,552 774	25,823 15,962 •21,125 54,053 12,789 5,253	*88 *26 *46 1.56 *59 1.05	*01 *004 *001	15°50 12°25 19°01 16°04 15°64 11°17	27 :80 :15 1:39 1:69 2:18	*18 *20 *28 *33 *37 *29	3.02 3.11 6.08 2.74 2.58 2.53	19:52 16:13 :26:65 22:09 20:83 17:20	26'00 20'74 26'98 20'55 21'42 17'99	1 2 3 4 5
17	25 16	133	<u>. 146</u>	321	2,326	18,042	1.68	·001	14.16	1·83 8·46	*84	2·53 3·98	19.63	20.28	
39 67 55 25	62 118 139 53 49	863 201 321 117 214	804 488 272 334 178	768 874 787 509 454	2,525 3,996 1,729 2,189 2,291	32,521 43,207 39,507 31,458 24,022	2:92 1:66 1:57 1:28 2:10	*007 *01 *009	16·73 22·73 17·51 23·77 17·62	*85 *15 *06 *08 *24	*53 * 56 *40 *44 *42	1.77 2.56 .89 1.91 2.15	22:83 27:69 20:46 27:51 22:55	19:37 38:20 25:16 25:34 23:18	8 9 10 11 12
10 83 6 3 16 13	17 49 6 30 43 8	300 216 285 137 114 21 71	354 323 296 174 143 7 53	681 621 * 593 * 344 815 49 138	2,139 1,170 2,740 1,875 959 524 858	48,793 42,899 61,808 20,614 33,054 4,282 19,109	*48 *35 1*89 *12 *83 *10 2*17	*01 *003 *009 *27 *001	80°02 80°74 25°97 25°09 23°95 19°60 29°26	*14 *06 *16 *03 *12 4*98 *13	*45 *47 *28 *47 *24 *33 *24	1.48 .88 1.51 2.57 .75 3.53 1.49	52*48 53*52 20*64 26*30 25*91 26*90 55*31	20°20 80°97 21°59 24°83 28°12 18°78 22°86	13 14 15 16 17 18 19
46 13 29 30	87 80 67 47	405 230 801 230	116 135 169 216	654 458 1,060 523	5,750 1,421 14,842 5,847	41,782 23,621 58,991 48,143	2·76 3·21 4·67 1·28	.01 .03 .03	. 13.55 0.88 .17.70 13.08	1·15 ·28 ·35 ·50	*32 *28 *56 *17	2·84 •87 7·86 1·94	20°64 14°56 81°25 16°02	20°98 15°63 25°15 13°04	20 21 22 23
5 8 17	5 8 20	591 470 477	91 72 44	692 558 558	2,067 2,270 6,270	17,000 18,805 29,545	1:23 :59 1:96	*0009 *03 *01	11°06 17°50 12°58	*52 *A3 *70	•6 <u>9</u> •68 •37	1.86 2.78 4.21	15:31 28:44 19:85	15:29 20:04 15:93	24 25 26
16 23 41 18 3 25	64 95 99 47 3 55 23	400 611 504 725 621 565 400	205 892 176 610 638 851 255	685 1,121 820 1,400 1,160 996 685	6,746 6,945 5,103 3,107 1,782 17,104 5,157	39,451 67,763 60,195 31,019 37,642 46,195 42,271	2-96 8-06 7-10 2-82 2-23 3-48 7-53	*10 *13 *06 *04 *05 *08 *35	16.82 20.58 21.12 7.30 10.52 7.67 13.37	1.84 .50 .43 .45 .69 1.50	*46 *54 *43 *56 *45 *45	4.58 8.40 2.75 1.24 .69 7.76 8.08	26:79 33:23 31:91 12:45 14:66 20:98 24:86	25.67 22.71 22.92 15.14 14.20 18.63 18.63	27 28 29 30 31 32 39
14 3 6 1 19	25 5 13 3 9	456 341 270 22 120	618 . 358 168 147 181	1,113 707 487 173 329	8,836 6,708 708 627 2,163	67,139 54,140 87,900 20,652 24,792	3:46 2:15 :85 1:09 :88	*04 *004 *61 *601 *003	19°09 27°28	*84 *48 *07 *06 *20	*59 *37 *24 *24 *21	4:68 3:51 :38 :89 1:38	35°59 28°35 20°66 29°58 15°89	19'97 22'72 19'61 19'59 14'17	34 35 36 37 38
57 34 10	151 59 48	422 176 1 7 6	308 107 112	938 875 352	7,765 12,749 5,124	82,745 28,390 22,278	2:61 9:55 4:57	·38 ·27 ·34	8°77 4°27 8°62	2·16 3·57 4·61	*54 *43 *38	4·49 14·76 5·53	18·98 32·87 24·08	19:87 21:41 25:03	59 40 41
13 8 85 6	27 7 32 13	289 187 45 116	184 319 163 135	512 521 275 270 25,651	2,965 7,891 1,423 2,853 189,816	28,564 41,027 9,409 18,386 1,494,406	*82 5*88 *27 *19	*009 *04 *01 *004	12.14 12.14	74 1'95 1'43 '80	*48 *32 *49 *25	2·72 4·64 2·55 2·71	26°20 25°79 16°92 17°52	18:68 16:48 14:70 14:62	43 48 44 46
873	1,768	12,/84	10,226												
•••	***	7 1 5	,,, 1 1	7 2 6	124 32 77	727 187 309	1'90 '91 8'20	·08	18·11 10·78 . 12·25	2:43 2:38 5:21	*20 *18 *54	3·63 2·95 7·04	21:33 17:15 28:25	40°14 27°33 29°16	1 2 3
.::	=,	2 	:::::: 1	3 g	57 80 38	235 276 151	1.01 .98 .23		6:61 7:32 8:16	1.70 -89 -39	*16 *15	\$*04 3*75 3*01	12:56 12:96 11:96	27°68 30°35 28°93	4 5 6
·••		••••••	*****	******	13	s.	12		3:18	*50		1.62	5*47	31-21	7
 :::		7 1 2	1 1 2 1	10 2 2 3	925 47 76 46	653 177 338 208	*95 *31 3*58 *64		7.08 7.09 13.64 13.10	4'46 1'81 4'56 1'83	*29 *15 *16 *27	6·70 8·71 6·20 4·21	19.45 14.00 27.16 19.06	96·54 16·61 20·80 15·30	8 9 10 11
1 '''1 		17 15	2 2 1	20 17	144 1 342 44 84	1,042 53 1,046 166 101	2:11 19 5:35 :67 7:81	.03 	13:81 5:99 11:94 6:11 4:58	6:71 :76 8:64 1:49 5:80	*63	8·71 ·09 12·68 2·98 6·17		18 68	13 13 14 15 16

Annual Form No VI.—Deaths registered from DIFFERENT CAUSES in the

1	2	8	4	5	6	
Number.	Districts and Towns.	Population according to Census of 1881.	Cholera.	Small-pox.	Fever,	Bowel-complaintg.
Z		<u>. </u>	<u> </u>	i i	<u>8</u>	8
17 18	Howrah District.	90,813 14 ,815	30£ 58	12	615 108	340 49
19	21-Pergunnahs.	2 51, 43 9	2,090	6	9 075	1 027
20 21 22 23 24 25 26 27	South Suburban Baranagoro Rajpore Augurpara N. wabganj Naihatti Basurhat Baduria	51,658 20,962 10,576 22,739 18,018 21,533 20,450 19,135	2,441 107 13 47 48 23 27 17	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3,675 310 313 141 296 264 • 255 125 114	1,817 108 154 24 57 70 37 9
28 29 30 31 82 33	Nuddea District, Kishnaghur Ranaghut Sartipore Kushua Meherporo Nobodip	27,477 8,083 20,687 9,717 5.731 14,105	• 20 4 40 9	2	395 37 291 58 78 85	22 6 14 9 7 7
34*	Jessore District. Jessore	8,405	5		78	10
85 86 87 88	Murshidabad District. Berhampore	23,605 10,861 39,231 10,187	. 5 7 24 5	1	593 162 1,226 142	46 12 139 93
39 40	Satkhira	8,758 6,178	6 20		130	1 7
41	Dinajpur	12,560	· si	1	140	33
43	Rajshahye District. Beauleah	19,791	18		593	62
43	Rungpur Uistesot. Rungpur	13,320	. 34	1	205	65
44	Bogra	6,179	2		30	12
45 46	Pubna	15,267 21,037	. 8		210 488	63 46
47	Darjiling	7,976		2	65	38
48	Julpaiguri	7,947	10	•••••	66	13
49 50	Daces	80,161 12,561	100		401 77	174 36
51	Faridpore	10.263	. 6	1	65	21
52	Barisal	13,186	68		105	94
54	Jamalpore	16,091 12,898 15,124	37 12	2	259 74 191	15 4 22
56	Chittagong District. Chittagong	23,150	o		177	42
57	Sudharam	5,124	1		17	5
58 59	Comiliah	13,506 17,543	87 16	i	198 267	43 59

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[App. L

Districts and Principal Towns of the Bengal Province during the year 1887-continued.

1		. 8	the state of the state of		9	10	•				11 '				19
		INJUR	r.		i	ALL	RA	TIO O	F DEATH	S PER	1,000 O	F POPU	LATIO	N.	
Spici	DE.	nts.	ed by			FROM							FROM A	A LL	
Male.	Female.	Wounds or Accidents.	Snake-bite or killed Wild Beasts,	Total.	All other causes.	TOTAL DEATHS FROM CAUSES.	Cholers.	Small-pox.	Гетег.	Bowel-complaints.	Injury.	All other causes.	For the year.	Mean of previous five years.	Number
· 2 	1	28 2	1 1	32	400	1,594 266	3·24 3·77	*13	5'67 6'85	3°74 3°30	. · *35 ·*26	- 1	17:55 17:95	26'79 21'93	17 18
* 6 1 1 1 	.3 1 2 	76 16 2 6 6 9 6	7 1 1 3 3 1	92 18 4 7 • 9 10 9	2,925 153 189 69 64 83 42 43	10,605 789 768 254 474 456 386 214 146	8:31 2:72 3:56 1:22 2:06 2:10 1:06 1:32	*02 *03 *04 *05	14.01 6.00 10.43 13.33 18.01 14.09 11.84 6.11 5.05	7-22 2-09 5-13 2-26 2-50 8-88 1-71 -44 -57	*86 *34 *13 *06 *39 *85 *41 *44 *20	11.63 2.96 6.30 6.52 2.81 4.80 1.95 2.10	42°17 14°13 25°61 24°01 20°84 25°30 16°09 10°46 7°62	43.87 17.07 27.11 17.11 124.38 24.60 80.65 24.93 15.73	19 20 21 23 33 24 25 26 27
2 	2	16 2 1 1 3	4 8 * 4	24 2 3 4 3 5	136 6 32 8 1 72	597 * 55 380 88 89 175	72 *46 1*34 *92		14:37 4:26 9:80 5:90 13:41 6:02	*80 *69 *47 *92 1:22 *40	-87 -28 -10 -41 -52 -35	4.94 .60 1.07 .82 .17 5.10	21-72 6:33 12:80 9:05 15:52 12:40	84·75 21·07 20·91 20·27 31·23 25·31	28 29 30 31 33 33
		8	.1	0	16	118	-58		9.18	1-17	1.05	1.89	15.89	80.84	, 34
1 s	2 1 	7 1 17 1	1 7 6 1	11 · 3 · 26 · 2	92 27 258 40	547 211 1,673 283	*21 *65 *61 *49	-09 -:-	16:04 15:19 • 81:25 13:93	1.94 1.12 3.54 9.12	*46 *28 *06 *19	3*99 2*53 6*57 3 92	23°17 19°79 42°64 27°78	26:77 21:66 88:49 28:17	35 36 87 38
1	•.	4 6	1	6	5 13	148 87	*68 3*23	:::	14·87 6·63	'11 1'18	*68 *97	2.10	16:93 14:08	21:97 30:43	39 40
1		4		5	61	252	*25	-07	11.80	2.62	-39	4.89	20.08	20114	41
	1	8	Đ	25	107	802	*75		29.90	3.13	1.56	5.40	40.25	81.07	42
1		10	6	17	75	387	2.22	.07	15:39	4.15	1.27	5.63	29.05	31.90	43
	ļ 	1		1	20	74	-32		6:31	1.94	-16	3.52	11.07	30.42	41
2	2	6 6	5 4	13 13	202 18	496 664	.25) ;;;	13:75 23:19	4·12 2·18	*85 *81	18:23 4:65	32:48 81:56	29°84 33°94	45 46
		2	•••••	2	41	148		.52	8.14	4.76	•25	5-14-	18.22	18'30	47
		.2		2	67	148	1-25		8-30	1.63	*25	7:17	18.62	80.45	48
4		10 6	2	15 10	570 107	1,261 884		·01	6.13 8.00	2·17 2·86	-18 -79 •	7-11 8-51	15:73 26:59	28*05 24*52	49 50
	:	10		10	18	121	-58	-09	6.33	2.04	-97	1.75	11.78	31-27	51
1	1	12		14	41	255			7-96	1.82	1.06	3.33	19-53	21.38	. 53
	: : : : : : : : : : : : : : : : : : :	1 8		1	80 80 80	346 948 258	2.80		18°0′ 5°73 19°53	-81	-18	4:11 2:32 1:10	21.24 11.54 14.53	27-27 24-96 20-47	53 54 55
1				7	79	. 31	4 -40		7:96	1.89	-31	3.26	14-18	24.23	56
		a	1	4	21		8 .11		3.3	1 197	-78	4.00	9.30	14.63	67
\ ₁		1		11 10		40 82			14.2	3.36	·81 ·57		30°18 80°04	22°65 26°90	5.8 59

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the

1				2						8			. 6	2
Number.		D	arrio:	es an	D TO	₩#6.		•		Population according to Census of 1881,	Cholera,	Small-por.	Fever,	Bowel-complaints.
	Ì				_			•		1	- i		- -	<u> </u>
		. T	OWNS Patn	-con a Dist	-	d.					.	1		•
60 61 62 63	Patna Behar Dinapore Barrh		***	•	•••		,	•• ••		48, 52,	971 825	78	9:	82 4 86 84 1 40 1
64	Gwa		Gya	Distr										ı
65	Gya Dauduagar				•••	•••	•••	***		76, 9,	B70 6	88	2 . 1,0	3
66 67 68	Arrah Dumraon Buxar	 	 	ad Di. 	strio: 	:::	•••	•••	•••	43, 17, 17,	165 2 835 2 68	99 95 80	9 81 1 22 7 11	38 22 28
		Мо	suffery	ore I	Dietri	ict.				1.				
70 71 72	Mozufferpore Sitamurhi Hajipore Lakanj		•	•••			•••	•••	• ,,	42,7 6,1 25,6 16,7	196 1	52 2 26 80	5 4 8 6 1: 8 12 12 12 12 12 12 12 12 12 12 12 12 12	33 1
73	Durbhanga	•••	irbhan ^{'I} Sa run	•••	•••				•••	06,0	96 20	53	18 79	3 35
75	Chupra Sewan Revilganj	•••			•••	•••	::: :::	···		53,2 13,3 12,4	07 2	30 · · · · · · · · · · · · · · · · · · ·	7 13 19 10 6 17	1 6
77	Bettiah	•	umpar 		•••	•••	. А	***		21,2	63 12	35	38 35	5 1
79 I	Monghyt Jamalpore Shaikpura			•••	 	•	•••	 	•••	57,5 13,5 12,5	83 1	9	12 63° 1 22° 32°	7
81	• Bhagulpore		agulpo: 		istrio 		••	···		57,4	53 15	0 1	1 720	3 27
62	Purneah		urneak 	Dist	rioi.	•		•••	•	15,0	1	7	4 30	5
83	English Bazar				rict. 	•••				12,45	10	s	101	1 14
36	Deoghur		Perg: uttack		• .	strict 		***		8,00	5 84		39	17
r 1	nttack Cendrapara Jajpore	•••	r Puri D	•		 		•••	• =	43,23 15,69 11,23	7 26	3 1	141 103 5 63	26
8 P	Puri	-		•		•••	···•	•••		24, 78	416		250	245
y 18	lalasore		 ribagh			•••	•••			20,26	. 181	8	188	127
B	lazaribagh		rduppa					•••		15,800	•		240	81
	anchi	Sing	 bhum			••	•••	•••		18,445	18	8	114	. 19
	hyebassa	 Man	 bhum	Listr	ict.	•	•••	•••		6,90 6	8		94	44
Pı	aruha	•••		***			•••	•••	-	9,804		•••••	118	26
				•	•		Tow		"-	2,409,578	8,915	831	25,195	8,408
			TOTA	L POE	THI	B Pr	ONING	739		66,163,984	172,578	3,846	1,087,768	56,893

Office of the Sany Commr. for Bengal,

The 2nd March 1888.

XIII

Districts and Principal Towns of the Bengal Province during the year 1887—concluded.

			8			9	10	V #4		در سند .		1		717			12
	<u> </u>	1	NJURY				ALL	R	ATIO	OF	DEATH	S PER	1,000 O	F POP	ULATIC	ON.	-
Svic	DR.		ats,	killed by			FROM				+				From Caus	eb.	
Male.	Female.		Wounds or Accidents,	Snakebite or kill Wild Beasts.	Tctal,	All other causes.	TOTAL DEATES CAUSES.	Cholera.	Small-por.		Ferer.	Bowel-complaints.	Injury.	All other causes.	For the year.	Mean of previous five years.	Number.
							-	•									
 :::			60 8 7 5	8008	68 13 0 7	1,089 188 65 97	3,767 71 t 480 412	4:69 1:59 1:14 1:77	2	10	8:62 6:86 4:48 6:92	2:89 1:75 2:16 4:87	*42 *26 *17 *29	6.79 3.88 4.24 4.10	23.50 14.51 0.10 17.45	28:25 24:17 12:40 26 81	60 61 62 63
1			28 3	3	32 3	1,381 81	8,590 174	8·78 3·64		53 20	14:41 9:52	4:87 -81	·42 ·30	18·14 8·14	47:18 17:62	50°92 80°29	64 65
 		2	11 .4 .5	8 1 2	15 7 8	147 60 87	918 686 356	6°87 16°54 4°52	k "C	20 05 39	7·77 12·44 7·24	2 53 2:85 2:60	*84 *89 *45	3:38 3:36 4:92	21'12 35'66 20'14	17:34 21:86 20:43	66 67 69
 		:	7 8 12 6	1 4 6	7 9 16 12	241 13 72 56	463 146 880 854	1:21 :32 1:01 3:57		11 65 23 47	3°11 13°55 4°78 7°44	*58 5*71 5*33 5*54	1146 1146 162 171	5·63 2·12 2·80 3·33	10:83 25:83 14:7× 21:09	26 20 32 97 19 34 22 34	69 70 71 • 72
		1	12	8	16	372	1,768	3.8	2 -	18	11.00	4.87	-24	5 62	26-74	27.68	73
		2	10 13 4	• 4 2 8	- 14 15 14	104 158 51	453 428 309	1.8; 5.6; 4.3	3 1.	13 42 49	2:49 7:58 14:32	1*09 4*50 5*28	. '26 1'12 1'12	1°95 11°87 4°08	8.29 87.18 80.29	21·23 29·45 31·21	74 75 76
			7		7	272	838	5.8	3 3·	-19	16.69	.21	•32	12.79	39.41	25*86	77
		8	39 4 6	. 12	59 5 13	335 167 • 54	1,444 460 524	1.4	10	20	11:07 -16:78 25: 56	4'85 8'02 '39	1:02 :86 1:03	5:82 12:31 4:31	88.00	25°99 40°25 30°27	78 79 80
			75	1	. 16	576	1,751	2.0	61	-19	12-63	4.78	*27	10.05	30.47	42.27	83
			6	2	8	76	4 p1	1 1.	13	-26	20:31	2.73	*53	5.00	30.08	36.26	82
			2	1	3	2	12	s .	24		8.15	1.12	*25	•1	8 9.80	20.01	83
			*****			4.5	13	3 4	-24		4.87	2.12		5.3	7 16.0	25.60	84
		,			4 4 3	174	70 31 13	7 1	:49 :65 :31	*06 *89 *44	3:26 6:56 4:7	3 1.68	25	11.0	B 22.1	0 28.03	86
	1	4	1	s :	3 13	338	1,26	38 10	3.78	-24	10.0	8.0	3 -55	137	51.1	6 58.06	88
	1			•	6 11	94	4	04	5-97	-39	6.2	6 6.5	88	4	53 84 1	37 28-9	89
	.			2	1	186	. 4	61	-26	:	15.6	5-2	9 -1	3 8	88 30":	24 22.4	90
	1			6		7 64	. 2	20	.70	.16	6-1	8 1.0	s ·3	7 . 3	47 117	92 17.2	4 91
		•••		3		3 16	1	60	· 4 9	····	15.0	35 7-3	2 .4	0 2	66 26	64 26.3	0 92
				6	1	7 33	1	85	.10		12.	38 2.	79 .	5 8	-84 10	88 24-8	93
	58	49	7	1	68 97	14,997	58,1	122	3.40	'18	10	46 3		40 0	-22 24	12 28	
j	981	1,817	18,4	10,5	91 26,65	30 204,81	3 1,552,6	528	2.60	108	16	44	65	40 3	25	20:	86

R. LIDDERDALE, M.D.,

Annual Form No. VII.—Deaths registered from CHOLERA in the

1	1	2			,		} :	3		1						
					. —		Circi Regi	STEA-	VILL	AGBS.					*	
Number.		Distri	іств.				Number in each District.	Number from which deaths from Cholers were reported.	Number in each District,	Number from Cho.ern deaths from Cho.ern were reported.	January.	February.	March.	April.	Msy.	June.
-'-			D:													
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli Borampore	rd wan .				::-	20 18 8 29 10 8	20 13 8 29 10 8	3,667 5,523 8,273 14,758 1,808 924	95 61 75 1,012 188 110	115 23 96 409 113 93	22 20 57 247 48 70	28 41 59 368 37 62	75 18 92 291 107 128	22 14 24 266 11 21	4 16 2 96 2 2 2
	Total of Hugh	ali, incl	uding	Sera	шроге	 •	1H 8	18	1,496	298	206 863	97	122	124	56	. 16
7	Howrah	···.	•••	•••	•••	•••			-,							
,	Pre 24-Pergunnah	esidency a exclu			ıburb	ı of			F 450	798	1,478	511	589	590	188	-10
*{	Calcutta Suburbs of Ca		•••	•••	<i>:</i> ::		31	31	5,882	- 58	1,611	178 689	308 897	1,028	257 445	72
•	1	otal of	24-Pe	rguni	alıs		32	30	3,071	616	876	163	91	472 1,113	581 440	126 51
9 10 11 12 •	Nuddes Jesson Murshidabad Khulm		 			::-	22 27 15	22 26 15	4,732 8,771 2,890	680 317 601	718 813 606	1:25 168 218	287 234 · 344	671 440	184 186	24 88
	Raj	shahye	Divis	sion.				_	0.001		. 52	18	25	274	912	12
13 14 15 16 17 18 19	Dinajpur Rajshahyo kungpur Bogga Pubna Darjiling Julpaguri		 		*** *** *** ***	::	17 14 17 76 10 5	16 14 17 7 10 4	6,921 5,296 6,737 4,229 3,954 961 1,060	111 .139 477 35 215 11 135	197 815 44 65 3 9	27 115 2 15 	26 27 8 8 84	1,297 8 586	101 1,315 30 211 1 445	13 281 9 4 240
	1	Jacos D	ivisio	n.							, ,		205	1,035	463	35
20 21 22 23	Dacca Fandpore Buckerkanj Mymensing	•••		 	• · · · · · · · · · · · · · · · · · · ·	: : ::	14 14 17 18	14 14 17 18	5,771 4,328 4,336 14,676	1,281 747 1,251 1,346	3,300 1,273 1,084 916	530 437 589 750	250 250 2,167 341	1,035 1,992 3,444 578	1,026 1,135 429	136 251 218
:	Chu	tayong	Divi	sion.		•					•		•		268	97
24 25 26	Chittugong Noakhah Tipperah	•••	:- :	. 			14 1: 13	14 10 13	1,390 2,628 6,481	139 139 732	8 246 1,832	51 559	51 333	76 507	205 29 214	13
	1	atna L)ivisi	on.							. 34	. 19	43	221	720	615
27 28 29 30 31 32 33	Patna Cya Shahabad Mozufferpore Durbhanga Sarun Chumparun					•••	17 14 14 13 11 13 10	17 14 14 13 11 13 10	5,959 6,581 5,673 4,974 6,359 4,578 7,766	1,097 1,546 096 587 390 810 835	12 127 37 86 2	20 5 4 20 1	214 160 28 68 1 38	654 474 173 231 85 610	4,671 1,352 2,665 1,263 627 6,180	2,893 2,108 1,516 1,510 1,124 3,856
	Bha	gulpore	Divi	síbn.			_		3,875	638	44		23	57 9	2,269	1,299
34 85 30 37 88	Monghyr Bhazulpore Parnech Muldah Sonthul Pergu	nualis	•			::	14 13 14 10 6	18 13 14 10 6	3,248 3,626 3,110 11,254	409 155 178 128	9 253 85 2	11 28 53 13	211 15 148 91	897 371 301 57	1,524 615 117 188	566 181 48 78
		rıssa D	iviain	n .												
39 40 41	Cuttack Puri Balasoro	•					18 6 10	• 13 6 10	9,165 5,166 6,432	1,154 1,413 1,116	524 278 410	206 91 209	882 585 450	202 712 528	248 681 775	198 1,517 442
	Chota	Nagpe	re Di	visio;	ı.			•				•				
42 13 44 45	Hazaribagh Lohardugga Singhbhum Manbhum		 	· :::	 	·	17 22 6 17	15 17 6 14	7,731 7,707 8,093 6,140	116 652 32 51	1-114 1- 20	• 3	15 263 8 46	33 193 88	289 370 42 25	268 1,075 52 1
i	Тотат	POR L	из Р	ROVIZ	ıck		645	627	231,946	23.894	16,662	5,804	8,024	21,068	82,435	21,188

OFFICE OF THE SANY. COMMR. BOR BENGAL,

The 2nd March 1888.

Districts of the Bengal Province during each month of the year 1887.

5				•	1		6					8	9
						İ	Тота	L.	1 3	TIO OF D BR 1,000 POPULATI	OF	during	
July.	August,	September.	October,	November.	December,	Male,	Female.	Total,	Ma'e,	Female,	Total.	Mean ratio per 1,000 previous five years,	Number.
63 73 8 469 21 10	74 18 230 8 11	16 8 94 3 24	 86 11- 20	33	33 1 4 930 67 11	150 178 2,056 250 261	152 190 1,861 196 224	302 368 3,917 448 495	1.65 -79 1.49	-36 -28 -46 1·46 - 56 1·26	-39 -24 -46 1:55 -67 1:37	2:20 1:12 2:54 1:53 1:21 1:88	1 2 3 4 5 6
18	19			58	78 243	709	535		2.21	1.67	1.95	2:39	7
48 101 144	46 49 95	103	92 101 193	142 140 282	809 · 257 1,066	2,489 1,395 3,884	2,089 095 2,781	2,000	8'00 0'47 8'98	2·63 0·06 8·10	2:82 8:31 3:56	2:66 8:58 3:45	} ĸ
49 33 2 85	57 15 11 8	18 12 19	16	81 22 1 60	144 220 1 125	1,396 1,631 767 1,336	1 288	2,674 3,047 1,511	1.72 1.70 1.80 2.85	1'51 1'44 1'16 1'82	1·61 1·57 1·23 2·10	5 13 3:45 2:46 2 19	9 10 11 12
7 10 68 3 8 63	6 17 51	9 2 1 1 1 6	6 4 3 2 1	20 20 37 35	8 8 3 2 2 132 1 1	329 272 2,021 45 575 11 617	\$20 217 1,961 49 516 5 638	1,091	-42 -41 1-89 -12 -88 -12 2-01	'43 '31 1'90 '18 - '77 '07 2'31	*42 *36 1*80 *12 *88 *10 2*15	'64 3'03 3'24 1'95 2'37 '86 1 46	13 14 15 16 17 18 19
11 32 - 66 50	17 4 20 13	2 4 19 17	7 6 15 18	34 16 20 16	161 50 52 505	2,816 2,842 4,852 2,127	2,094 2,384 4,083 1,784	5,800 5,226 8,885 8,911	2°72 8°52 4°08 1°36	2°75 2°88 4°34 1°19	2:74 3:20 4:67 1:28	2:48 3:27 3:04 1:88	20 21 22 23
65 4 2	141 	55 5	136 4 4	911 44	221 10 7	724 248 1,524	653 240 1,451	488	1°36 °59 1°97	1:08 :59 1:93	1°21 '59 1°95	1:08 :79 1:85	24 25 26
2,135 5,294 6,132 1,173 1,328 2,688 901	1,155 2,881 2,760 813 668 2,617 970	121 399 574 400 892 579 321	79 87 256 282 322 152 90	89 60 118 87 60 17 4	68 19 1 8 143 1	2,779 9,111 7,430 8,930 8,905 4,181 7,101	2,513 8,008 6,637 3,247 2,789 3,710 5,828	5.292 17,110 14,067 7,186 5,994 7,894 12,929	3'23 8'73 7'81 3'11 2'47 3'80 8'15	2-79 7-40 6-64 2-46 2-08 3-09 6-81	3:01 8:05 7:16 2:78 2:27 3:46 7:50	1:81 2:13 2:27 2:36 1:79 1:10	27 28 29 50 51 32 23
1,294 851 46 4 96	1,064 358 46 72	135 188 9 29	92 75 98 8 8 31	21 42 14 4	29 1 18	3,606 2,207 831 430 358	8,204 2,000 746 335 272	6,810 3 4,207 1,677 765 630	3.72 2.25 2.88 1.23 -46	3:20 2:08 :81 :92 :34	3:45 2:17 %5 1:07 '90	1:46 1:79 1:62 2:20 1:31	3 k 35 36 37 37
1,019 2,969 745	864 941 208	427 270 HB	201 103 55	176 304 181	224 348 269	2,305 4,516 2,266	2,366 4,152 2,087	. 4,671 8,668 4,953	2·62 10·11 4·91	2·58 9·39 4·31	2-80 9-75 4 GJ	3*98 3*86 4*86	89 40 41
217 2,769 46 9	61 2,778 8 9	20 1,329 5	500 2	158	19	500 4,085 89 95	403 4,390 67 110	903 9,375 156 205	*91 6*25 *31 *18	71 5:40 24 20	. '81 5'*2 '27 '19	1:07 :33 :19 1:01	42 43 44 45
30,566	19,268	5,761	2,946	2,748	5,208	28,10	80,746	172,578	2.79	2.42	5.60	2.11	

R. LIDDERDALE, M.D.,

Annual Form No. VIII .- Deaths registered from SMALL-POX in the

1			2 				<u> </u>		3		4					
									ES OF BATION,	VILL	AGES.					•
Number.		DISTR	ICTS.		•		Number in each	District.	Number from which deaths from Small- pox were reported.	Number in each District.	Number from which deaths from Small. pox were reported.	January.	February.	March,	April,	May.
	Bu	rd wan	Divi	isign.									•			
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli Serampore				···	•••	<u>:</u>	20 13 8 20 10 8	 8 2	8,667 5,523 3,273 14,758 1,808 924	12 2	1	3	1	1	
,	Total of Hu	ghli, in	cludi	ng Se	rampo	ore		18		2,732		1				
7	llowrah		•••			•••		8	1	1,496	8				5	
	1	side n c _l							•							
8{	24-Pergunnahs Calcutta. Suburbs of Ca	-	18176	of S	uburt	os of		91 1	10	5,382 98	8	4	• 1	3		
-	1	otal of	24-P	ergun	nahs			:29	11	5,480	10	4	1	3		
9 0 1 2	Nudden Jessore Murshidabad Khulna		 		•••	 		81 22 27 15	6 6 1	8,071 4,732 8,771 2,890	16	2	2 1	5	1	
	Raj	shahye	Divi	ision.												
3 4 5 6 7 8	Dinajpur Rajshabyo Rungpur Bogra Pubna Darjiling Julpaiguri			***		•••	•	17 14 17 10 10 5	5 1 3 4 1	6,921 5,206 6,737 4,229 3,954 961 1,060	10 2 9 21 1	 1		14	1 2 15 19	
^	1	acca L)ivisi	on.												
0 1 2 3	Dacca Faridpore Backerganj Mymensing	•••	•••	 	•••	•••		14 14 17 18	5 5 15 12	5,771 .4,326 4,336 14,676	13 5 74 29	8 1 23 	3 22 6	1 2 19 8	1 12 15	· ••••
	ł	tagong	Div	ision	•									*		
4 5 6	Chittagong Noakhali Tipperah	 ,	·•••	:::	•••	•••		14 10 13	1 4 5	1,390 2,628 6,481	1 15 10	 8	9 3	9 8	5 1	
	l .	atna L)ivi s i	on.					1							
17 18 19 10 11 2 13	Patna Gya Shahabad Mozufferporo Durbiga Sarun Chumparun	•••					•	17 14 14 18 11 13 10	15 14 12 18 11 13	5,959 6,531 5,673 4,374 6,359 1,578 7,766	90 209 112 87 102 111 290	8 5 26 6 2	5 6 10 21 4 13	8 23 13 83 21 7 59	27 46 19 35 89 29	1
	Bhag Monghyr	ulpore		ısion.												
บี 7	Bhazulpore Purnesh Maldah Sonthal Pergu	 nuahs	•••	•••		::: :::		14 13 14 10 6	11 7 7 1 2	8,875 8,248 3,626 3,110 11,254	* 66 13 19 1 1	, 	7 2	12 1 3 	27 7 2 2	•••
-		rissa I	livisi	on,		1			,	Ì						
	Cuttack Puri Balasore		···	•••	• :::	:::		13 6 10	13 6 10	9,165 5,166 6,4 32	. 390 107 163	37 # 116	133 8 92	186 14 59	142 Xi 18	
1	Chota .	Νυηροι	e Di	visio	n.											
	Hazaribagh Lohardagga Singhawin Manbhum			•••	 	•		17 22 6 17	12 2 4	7,731 7,797 8,093 6,140	. 10 57 5 3	*****	-: 1	2 2 1	3	••••
j	• Toral	POR TI	er Pi	ROVII	(CB			45	268	251,046	2,098	269	350	507	621	6

Office of the Sany. Commr. for Bengal,

The 2nd March 1888.

xvii

Districts of the Bengal Province during each month of the year 1887.

8					~			6		7			8		9	10
		•						Total	•	THESE AM	BER OF DEATHS ONG DREN.	TOTAI 1,000 OF	RATIO POPUL	PER	of previous	
June.	July.	August.	September.	October,	November.	December.	Male.	Female.	Total.	Under one year.	Under twelve years.	Male.	Femsle,	Total,	Men ratio per 1,000 of previous five years.	Number.
 3 	1	1 1 1		7	4	1 1 1	9 4 1 	9 8 1 	18 12 2			*01 -005 -003 	*01 *006 *002	*01 *004 *008 *****************************	·07 ·02 ·01 ·09 ·03 ·03	1 2 3 4 5 6
	1	1	*****	2	1		5	7	12	4	11	.01	-02	.01	·0\$	7
				· 2	3 3	1	8 4	7 2 9	15 6 21		1	-02	°008	·009 ·02	-03 -35	}*
3		1		1	3		11 6 1	8 6	19 12		11	1	*009	*01 *009 *0009		9 10 11 12
11	 3	1	**************************************			2		6 2 12 19 1	19 4 21 45		2	.008	*008 *002 *01 ******************************	-01 -002 -01 	*01 *02 *002 *008 *005 *11 *008	18
1 4 2 2	 5 3	 6 17	 1 5 2	8	3 29 1	28 28	10 23 108 1 28	14	16	7	6	9 ·009 ·02 ·11 ·1 ·01	*002 *01 *06 *02	-02 -08 -02 -02	*11 *06 *16 *11	20 21 22 23
	1						1 21	7 10	2 2	1	2]	1 9 '04 12 '02	.008 .05	*03	8 ·21 ·38 ·18	24 25 26
16 64 14 12 25 47 120	9 8	16 17 15 6 17 34	14 4 7 1 1 12 9	3 1 5	2111111		5 97 2 165 67 1 77 2 71 2 121 0 382	3 150 7 69 7 63 1 87 1 108	13 14 15 22	9 6 0 8 9	28 13 20 13 50 13	15 15 36 07 31 06 22 05 15 11	*10 *14 *06 *04 *08 *09 *34	*10 *15 *06 *05 *05 *10 *39	*35 *47 *13 *11 *12 *35 *74	27 28 29 30 31 32 33
8 1 5	8 3	1	1 1 	1	1			8 44 0 16 1 2		92 19 26 1 5	5 4 1	78 . *04 15 . *01 9 . *01 1 . *00 8 . *00	22	9 .009	10°.	37
87 13 7	16 20 6) 8	16	: 2 1	36		86 32 13 11 9 17	0 363 6 126 2 166	2 60 5 24 3 3:	92 7 41 80	41 1	81 *36 81 *25 15 *37		·37 ·27 ·35	*61 *51 *46	39 40 41
9 91 	18	 17					2 3	7 9 2 2 3	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	10 67 6	1 1 1 .	4 '01 6 '04 4 '00 3 '00	7 '03	*04 *01	114	42 43 44 45
415	285	185	92	8:	148	21	9 2,01	2 1,83	3,8	46 7	52 2,7	.nc. 66	*05	-05	.10	-

B. LIDDERDALE, M.D.,

1				2				[8		4	<u> </u>					
									16 KG I	RS OF STRA-	VILLA	1					
n umber.			Dist	Picti	•.				Number in each District,	Number from which deaths from Fever were regis- tered.	Number in each District.	Number from which deaths from Fever were regis- tered.	January.	February.	March.	April.	May.
i			Burdwa	n Dir	ision					Ì							
1 2 3 4 5 6	Burdwan Bankura Birbhum Midnaporo Hughli Soramporo		•••	•••					20 13 8 29 10 8	20 13 8 29 10 8	3,667 6,623 8,273 14,758 1,808 924	3,317 8,396 2,548 9,798 1,615 693	2,130 1,160 1,342 3,686 1,189 440	1,641 984 1,084 3,141 898 328	1,768 1,135 1,305 3,377 938 327	1,748 974 1,801 2,969 734 304	1,558 990 1,008 2,841 670 268
١	Total	of I	Iughli,	inclu	ding 8	eram;	po re	•••	18	18	2,732	2,308	1,638	1,226	1,265	1,038	938
7	Howrah	•••	•••		***		•••		8	8	1,496	1,095	598	462	415	441	387
8 [4	24-Pergunn Suburbs of	shs,	residen exclusiventia				Calcut	ta	31 1	81 1	5,382 98	4,322 64	2,645 361	1,736 268	1,716 230	1,627 234	1,575 227
1	Da041115 (12	0411			24-Pe	rguni	alıs		32	32	5,480	4,386	3,006	2,004	1,946	1,881	1,802
9 10 11	Nuddea Jessore Murshidaba Khulno	 d	 	 	 	••• ••• •••	•••		31 22 27 15	31 20 27 15	8,071 4,782 8,771 2,890	2,513 4,195 3,245 2,333	8,335 4,343 2,197 2,372	2,286 2,344 1,509 1,451	2,473 2,431 1,765 1,148	2,553 2,761 2,375 1,288	2,958 2,46N 1,892 1,029
		Æ	laj sh ah	ya Di	vision	3.								•			
8 4 5 6 7 8 9	Dinajpur Rajshahyo Rungpur Bogra Pubna Darjiling Julpaiguri			•••					17 14 17 10 10 5	17 14 17 10 10 5	6,921 5,206 6,737 4,229 3,954 961 1,960	6,140 4,636 4,226 2,877 3,171 49 932	5,178 4,975 6,324 2,027 8,409 242 1,603	3,455 2,933 4,420 1,317 2,575 248 1,393	8.523 2, 163 4,604 1,227 2,355 214 1,462	3,779 2,866 4,649 1,412 3,304 242 1,573	8,800 8,547 8,654 1,546 8,169 273 1,539
ı			Davca	Divi	sion.								ļ				
20 21 22 23	Pacca Faridpore Buckergani Mymensing			•••	 	•••	: : :::	 :	14 14 17 18	14 14 17 18	5,771 4,326 4,336 14,676	4,830 2,317 2,833 3,487	3,311 2,037 4,749 3,293	2,296 1,801 2,623 2,679	2,177 1,121 2,615 2,377	2,279 1.543 9,611 2,935	2,07: 1,27: 2,13: 3,10:
		(Chittago	ng V	ivisio	n.											
24 25 26	Chittagong Noskhali Tipporah		•••		•••	•••	.:	:. :::	14 10 13	14 10 13	1,390 2,628 6,481	960 1,802 4,162	1,243 1,464 2,125	988 1,193 1,457	950 1,160 1,441	906 1,302 1,669	89 1,24 1,61
			Patna	Divi	sion.						5,959	3,845	1,955	1.341	1,179	1,497	2,39
27 28 29 30 31 52 33	Patna Gya Shahabad Mozuiterpoi Durbhanga Sarun Chumparur	•••				•••	***		17 14 14 13 11 13 10	17 14 14 18 11 18 10	6,581 5,678 4,374 6,359 4,578 7,766	4,923 4,853 3,653 2,097 1,821 2,484	2,805 3,816 1,944 2,152 1,103 2,152	1,941 1,985 2,252 1,195 1,834 968 1,401	2,555 2,215 1,234 1,601 977 1,526	2,624 2,446 1,371 2,168 1,230 1,608	2,59 4,24 2,72 1,43 2,19 1,58 2,13
		B	hagulp	ore D	ivis 10	n											
34 35 36 87 38	Monghyr Bhagulpore Purneah Maldah Bonthal Pe	•••	 mabs	•••		•••	•••	•••	14 13 14 10 6	14 13 14 10 6	3,875 3,248 3,626 3,110 11,254	3,093 2,747 3,609 2,760 0,695	4,017 8,290 8,376 1,513 1,610	2,724 2,607 2,711 965 1,309	2,931 2,703 2,590 890 1,421	3,588 3,224 2,622 1,318 2,009	5,04 3,45 2,16 1,25 1,96
			Ories	2 Div	ision.										l		
39 40 41	Cuttack Puri Balasore	 	••• •••	•••	•••	•••	•••	•	13 6 10	6	9,165 5,166 6,432	1,803	1,617 533 1,235	1,447 377 679	1,377 386 645	1,232 304 516	1,0 2 4
42 43 44 45	Hazarfhagl Lohardugg Singblum Manbhum	b	ota Na <u>r</u> 	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Divi	 		 	17 22 6 17	6	7,731 7,797 3,093 6,140	4,505 1,950	1,587 1,016 540 1,027	1,284 1,024 523 852	1.442 1,400 544 1,032	1,855 1,549 554 1,269	1,9 1,7 5 1,4
			TOTAL	. POR	THE	Prov	INCR		645	645	231,940	149,016	105,105	74,363	75,365	83,283	85,1

Office of the Sany. Commr. for Bengal,

The 2nd March 1888.

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the Districts of the Bengal Province during each month of the year 1887.

5		-			· · · · · · · · · · · · · · · · · · ·			6			7		8	9
								Total.		PR	OF DFA R 1,000 O ULATIO		00 during	
June.	July.	August.	September.	October.	November.	December.	Male,	Female,	Total.	Male.	Female,	Total.	Mean ratio per 1,000 previous five years.	Number.
1,076 756 812 2,270 469 179	1,261 865 959 2,775 519 178	1,613 1,165 1,204 8,431 621 270	1,448 848 1,061 8,109 631 261	2,120 1,153 1,592 3,703 998 374	2,895 1,800 1,989 4,122 1,195 455	2,647 1,196 2,036 4,412 1,318 452	11,036 6,739 7,841 20,803 5,200 2,064	10,369 5,767 7,852 19,061 4,980 1,781	21,406 12,506 15,693 39,804 10,180 3,845	16'51 13'28 20'54 16'73 16'47 11'83	14:33 10:78 19:01 14:98 14:33 10:02	15:37 12:00 19:75 15:84 15:35 10:92	20·78 16/33 20·06 14·99 16·72 11·74	1 2 3 4 5 6
648	697	891	892	1,872	1,650	1,770	7,264	6,761	14,025	14:82	12.87	13'81	15.00	
294	292	531	468	720	861	835	3,506	2,798	6,304	11.07	8.77	9-92	8:62	7
1,232 194	1,570 257	2,103 280	1,943 315	2,731 325	3,237 496	3,527 448	13,953 1,985	1,689	25,642 3,675	16'81 18'48	14·79 16·21	15.84 14.61	14:09 15:86	} s
1,426	1,827	2,383	2,258	3,056	3,733	3,095	15,938	13,379	29,317	16.33	14.95	15.67	14.35	
1,784 1,752 1,336 882	1,634 1,709 1,685 1,021	2,697 1,977 2,120 1,255	2,556 2,162 2,522 1,488	4,243 . 3,139 4,030 1,951	5,517 4,370 4,419 2,455	4,386 4,448 8,3 6 2,005	19,578 19,536 15,339 9,696	16,844 15,368 13,767 • 9,249	36,422 33,994 29,106 18,945	24·29 19·42 28·15 17·05	19:81 15:67 21:50 18:08	21-99 17-18 23-72 17-54	28:34 20:52 21:19 18:08	10 11 12
2,629 2,340 3,372 1,056 1,864 272 1,367	2,798 2,425 3,570 1,185 1,718 229 1,139	2,962 2,059 3,295 1,377 1,850 249 905	8,059 2,781 8,033 1,285 1,535 229 822	5,033 4,767 4,609 1,783 2,829 243 1,610	4,682 4,619 6,179 1,898 3,149 235 1,632	4,849 4,463 6,047 2,169 3,521 307 1,810	24,580 21,615 29,477 9,722 17,383 1,729 8,989	20,667 19,523 24,840 8,593 13,874 1,249 7,866	45,247 41,138 54,857 18,315 31,257 2,978 16,855	31°42 32°73 27°60 26°08 26°81 19°34 29°41	28·23 28·77 21·14 23·75 20·91 18·71 26·49	29'87 30'73 25'90 24'94 23'82 19'07 28'98	18:15 26:73 18:82 20:68 24:23 9:35 20:07	15 14 15 16 17 18 19
1,512 969 1,780 2,675	1,461 1,170 1,955 8,052	1,579 1,004 2,037 2,991	1,708 783 2,118 2,338	2,623 1,594 3,077 3,448	3,352 1,557 3,964 8,927	3,527 1,787 3,856 4,126	14,798 8,878 17,183 20,562	13,110 7,216 16,348 16,285	27,903 16,089 33,531 36,847	14°30 11°00 17°65 13°23	12:11 8:73 17:62 10:86	13*18 9*86 17*63 12*07	13'34 110'78 15'60 8'96	20 21 22 23
834 1,170 1,481	1,065 1,111 1,815	1,141 • 944 1,711	971 870 1,115	996 1,052 1,472	1,131 1,273 1,631	1,348 1,453 1,756	6,599 7,183 10,251	5,864 7,164 8,939	12,463 14,297 19,190	12:41 17:17 13:29	9°76 17°66 11°94	11:00 17:41 12:63	11:42 15:42 10:94	26
2,014 3,380 3,085 1,458 2,171 1,612 1,911	4,586 4,783	3,900 6,478 4,978 1,709 2,884 2,272 1,998	2.715 4.190 4.121 1.481 2.490 1,702 1,856	2,605 4,124 8,874 1,741 2,788 1,355 2,077	2,138 3,703 3,644 1,976 3,064 1,384 2,448	1,561 2,539 2,801 1,652 2,630 964 1,823	13,872 21,43, 22,017 10,743 15,327 9,914 12,996	12,040 21,724 18,519 7,926 12,485 7,400 10,009	26,861 43,163 40,536 18,649 27,812 17,314 23,095	16°15 20°54 23°16 8°48 11°82 9°14 14°92	14:47 20:00 18:25 6:02 9:33 6:18 11:86	15·28 26·31 20·62 7·23 10·56 7·59 13·41	15:38 17:92 17:36 9:42 10:16 7:34 11:68	28 29 30 31
3,895 3,196 1,956 787 1,937	3,540	5,392 8,651 1,894 1,272 2,173	4,568 3,729 2,163 1,601 1,869	5,288 4,426 3,684 2,719 1,779	5,413 4,522 4,939 3,114 1,708	4,037 4,020 5,375 2,801 1,665	96,420 22,250 19,323 10,729 11,856	24,695 20,147 16,002 8,418 9,567	51,115 42,397 95,325 19,147 21,423	27:26 22:72 20:62 30:91 15:09	24:67 20:41 17:55 28:16 12:22	26.52	16:39 17:60 17:33 16:42 11:34	36 36 37
773 229 407	171	1,082 201 669	1,201 262 632	1,331 208 731	1,636 435 820	1,780 469 825	7,571 1,829 4,024	7,865 2,116 4,091	15,436 3,943 8,115	4.09	4.74	4-43	8:06 3:92 8:44	40
1,624 1,549 503 1,007	1,700 570	705	2,211 2,315 645 1,866	2,305 2,521 504 1,079	1,927	2,027 1,678 610 1,093	12,170 11,105 3,684 7,792	11,427 9,586 3,162 6,533	23,597 20,691 6,846 14,325	13.11	1 :: :5	12.18	14:98 12:30 10:88 10:34	4
69,851	80,808	91,403	82,826	107,879	119,031	113,204	580,226	507,542	10,87,768	17:67	15.53	16.44	14.8	•

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

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App. I.]

Annual Form No. X .- Deaths registered from BOWEL-COMPLAINTS

1			2					8	1	4	1			- T		
								LES OF	r. VIL	LAGES.				1		
Number.		Dist	RICT	.			Number in each Dis- trict.	Number from which deaths from Bowel- complaints register-	Number in each District,	Number from which deaths from Bowel.	January.	February.	March.	April.	May.	June.
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli	rdwai	 	vision.		•••	20 13 8 29	20 13 8 29 10	5,528 3,278 14,758 1,808	216 80 1,838 570	34 12 406 170	10 268 136	49 18 311 116	26 11 246 97	36 25 11 266 68	25 25
6	Serampore	ee.	 imalu	 Avnæ 6	 Lupa mr		*18	18	-	_	-j	233	-]	·	116	101
	Total of H	ugnn,	inciu	mig c	четын	юго		10	2,782	- 092	- 331	-	<u> </u>			
7	Howrah	•••	•••	•••	•••	•••	8	8	1,496	729	297	195	186	126	1111	112
	Pre	sidenc	y Di	vision												l
s {	24-Pergunnah Calcutta	s, exc	lusive	of S	uBurb	s of	31	31	5,382	795	260	159	131	115	95	98
°ł	Suburbs of Ca	lcutta	• •••	•••	•••		1	1	98	33	262	161	118	91	88	66
	1	rotal o	f 24-P	ergun	nahs		32	32	5,480	828	522	320	249	206	183	164
9 10 11 12	Nuddea Jessore Murshidabad Khulna		••• ••• •••	:::	•••	:::	81 95 97 15	25 18 23 15	3,071 4,782 8,771 2,890	151 75 102 208	55 6 34 36	21 9 30 19	24 21 28 29	35 7 20 23	31 12 35 20	27 7 17 13
i	Raj	shahye	Divi	sion.		- 1					l	Ì		İ		
13 14 15 16 17 18 19	Dinajpur Rajshahye Runapur Bogra Pubna Darjiling Julpanguri			•••			17 14 17 10 10 5 9	17 11 17 8 10 5	6,921 5,206 6,737 4,229 3,954 961 1,060	141 48 200 19 140 158 57	28 11 40 2 30 31 9	17 5 38 26 21	22 6 85 24 22 23	24 90 65 2 34 38 6	25 15 64 5 88 87 25	20 6 80 2 14 146 4
	I.	acca l)ivisi	on.			}					j				ļ
20 21 22 23	Dacca Faridpore Backerganj Mymonsing	•••	•••	 	••• ••• •••	:::	14 14 17 18	14 14 17 18	5,771 4,826 4,836 14,676	818 212 390 947	550 93 103 178	350 57 57 72	226 49 75 84	311 67 79 182	244 53 79 250	124 17 43 170
	Chit	tagon	Div	inion.							ł	1				
14 25 26	Chittagong Noakhali Tipperah				•••	:::	14 10 13	14 10 12	1,390 2,628 6,481	271 282 509	63 106 122	35 57 90	29 62 80	57 131 126	60 117 100	37 40 58
-	P	atna L)ivisi	on.		,	1						ŀ			
2	Patna Gya Shahabad Mozufferpore Durbhanga Sarun Chumparun						17 14 14 13 11 13 10	17 14 14 13 11 13 10	5,959 6,531 5,678 4,374 6,359 4,578 7,766	1,122 481 578 694 823 650 142	254 70 54 138 223 188 7	127 62 21 102 159 197	147 47 20 113 122 183 9	171 71 64 119 166 194 19	306 116 76 143 205 254 51	288 111 64 142 175 359 34
	Bhag	ulpore	Divi	sion.			1									
5	Monghyr			•••			14 13	14 13	3,875	388 604	49 84	59 66	51 63	61 97	118 115	137
6	Buaguipore Pirneah Maldah Sonthal Pergui	mabs		•••			14 10 6	13 14 6 6	3,244 3,626 3,110 11,254	7.) 29 198	18 15 26	9 5 13	5 2 38	14 11 46	35 4 14	92 11 1 37
-	Or	issa D	irisi	o n.				l								
•	Cuttack Puri Balasore	••• •	•••	 	••• •••	:::	13 6 10	18 6 10	9,165 5,146 6,432	2,309 1,488 1,936	328 351 428	327 291 383	374 253 382	S14 246 352	288 240 342	220 237 300
	Chitt	agong	Diri	sion.				ł	1	.						
	Hazaribagh Louardugga Singbhum Manbhum	····		 	•••		17 22 6 17	17 22 6 17	7,731 7,797 3,093 6,140	491 1,174 472 746	37 86 63 41	40 121 46 61	49 114 43 85	75 161 51 99	96 269 70 100	79 270 80 81
-	• Total	FOR T	ни Р	BOV) N	(C 3		645	619	3,31,946	23,908	5,632	4,092	3,996	4,373	4,854	4,114

Office of the Sany. Commr. for Bengal,

The 2nd March 1888.

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in the districts of the Bengal Province during each month of the year 1887.

5				** WAY			6			7	-1	8	. 9
							TOTAL.		BATIO OF	DBATHS I	PBR 1,000 ON.	during	
July.	August.	September,	October.	November.	December.	Male,	Female.	Total,	Yale.	Female.	Total.	Mean ratio per 1,000 during previous five years.	Number,
30 84 16 31 66 47	51 47 19 276 100 70	44 22 8 204 84 76	34 17 4 347 126 85	53 27 7 312 128 68	71 24 2 430 162 109	349 226 75 2,089 667 488	189 128 49 1,595 610 446	538 354 124 3,673 1,307 934	752 744 719 1767 2711 2779	-26 -23 -11 1·24 1·84 2·51	*38 *33 *15 1*46 1*97 2*65	*52 *57 *21 1 *59 2 *16 2 *64	1 2 3 4 5
98	170	160	211	238	271 829	1,133	1,086	2,241	2:35	3.42	3.20	3.89	7
-				20."	320	1,100	1,001	2,22.	3 54	3 92	3 50	3 63	,
117 107 224	138 140 294	120 162 282	148 143 291	147 208 355	163 265 428	017 1,089 2,006	774 728 1,502	1,691 1,817 3,508	7·39 2·05	°97 6°98 1°67	1 04 7·22 1·87	*88 7:01 1:71	} s
20 5 19 8	19 12 85 18	19 6 84 16	8 16 34 25	23 9 49 25	28 23 51 34	188 89 233 157	122 44 153 100	310 133 386 266	•23 •09 •39 •27	*14 *04 *23 *21	*18 *06 *31 *24	*43 *12 *29 *26	12 11 11 9
10 7 26 15 135 4	8 14 22 5 5 128	9 16 16 2 15 64 1	86 16 20 4 9 42 6	26 19 20 3 24 26 3	19 12 19 11 28 37	150 104 203 25 168 425 55	94 43 142 11 98 352 36	244 147 405 36 266 777 91	119 115 124 106 125 475 118	12 106 13 108 14 5:27	16 10 19 04 20 497	*19 *11 *19 *12 *27 *2*18 *20	15 14 16 16 17 18 19
125 17 45 98	72 25 40 92	84 15 33 70	111 21 39 130	190 31 45 109	168 88 59 187	1,385 293 876 944	1,170 190 321 628	2,555 483 697 1,572	1°88 '38 '38 '60	1°08 °28 °34 °41	1·20 ·29 ·38 ·51	1'49 '40 '38 '41	20 21 22 23
47 82 88	85 28 41	86 20 95	37 14 105	57 30 135	85 51 153	315 350 663	813 338 483	628 688 1,146	*59 *84 *80	*52 *83 *64	*55 *83 *75	*54 *91 *43	24 25 26
474 250 1196 111 212 618 46	674 255 191 115 181 490 84	898 1 16 121 130 165 874 86	286 115 92 98 161 336 17	211 70 86 133 172 280 13	208 91 42 90 175 185	1,905 820 612 902 1,246 2,006	1,589 593 415 582 870 1,546 117	3,494 1,413 1,027 1,434 2,116 8,552 290	2:21 -78 -64 -71 -96 1:85	1°76 '54 40 '40 '65 1°29 '13	1 '98 *66 *52 *55 *80 1 '55 *16	2:36 :18 :39 :81 1:11 1:71 :22	27 25 29 30 31 52 53
90 133 20 2 2	127 142 N 2 67	88 134 12 1 1	84 99 12 3 19	60 91 14 6 15	44 85 12 5 10	597 743 99 29 220	371 458 80 28 112	968 1,201 179 57 332	*61 *75 *10 *08 *28	'37 '46 '08 '07 '14	*46 *61 *09 *08 *21	-36 -85 -16 -05 -31	34 35 36 37 39
820 258 800	875 833 402	335 276 369	312 267 839	317 281 800	3 63 268 876	2,269 1,809 2,387	1,605 1,522 2,006	3,874 3,331 4,393	2:58 4:05 5:17	1.74 3.41 4.14	2·15 8·74 4·64	2:01 2:74 5:30	39 40 41
121 355 85 100	134 634 117 79	110 511 76 64	66 297 72 58	34 193 64 - 56	51 121 77 49	519 1,782 476 542	343 1,849 863 831	892 3,131 814 873	1°00 2°23 1°69 1°03	*61 1*86 1*30 *62	*80 1*94 1*49 *82	198 1183 1140 193	42 48 44 45
5,178	6,017	4,846	4,530	6,477	4,784	32,381	24,512	56,893	98	.7 3	-85	89	

R. LIDDERDALE, M.D.,

APPENDIX No. 11.

STATEMENT AND MAP ILLUSTRATING THE DISTRIBUTION OF CHOLERA IN BENGAL

DURING THE YEAR 1887.

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887.

1	2		3	4	5		6		7	8	9	1	LO
	ortuary a on the			es.	olera in Fear,		clera in year,		the year.		each of	Numbi	
DISTRICTS.	Number of circles of mortuary registration as shown on the	Map.	NAMES OF CIECLES.	Population of the circles.	Date of first case of Cholera the circle during the year.		Date of last case of Cholera the circle during the year,		Total deaths from Che the circle during the	PERIOD OF MAXIMUM INTERNITY OF THE DISEASE AS METHERSITED DY MORTALITY.	Number of villages in the rural circles.	Affected by Cholera.	Not affected by Cholers.
· 	1	1	Burdwan T.	34,080	January 1887 .	ì	December 188		6 5	March, May, August and September. January, February,	1	1	******
		- 1	Kulna, Raniganj,	10,901 10,937	Ditto March		July December •		35	April and July. March to August, Nov-	1	1	•••••
		4	Burdwan B. C.	27,830 71,709			April		13	April	105 228	3 2	102 226
			Scimabad ,, Royna ,,	97,100	January	:-	September	:::	68	January, April, August and September.	266	8	258
Burdwan		8	Khandghose	54,981 102,748	February .	::	November June July	:::	46 15 19	August and Septembor Slight July	146 873 166	2 2	142 371 164
		0	Sahebganj ,, Bood-Bood ,, Ausgrain ,,	75,171 79,078 97,311	April		August Ditto	:::	24 i 20 i	April and August	209 232	5 8	204 229
	1	2 3	Kulna Purbusthali ,,	81,583 82,070	Ditto Ditto	-	April December	:::	16 22	January and December	266 251	6	260 249
	1	5	Montessur	63,058 82,943	Ditto		April December	:::	9 14 59	Slight January Ditto	183 167	12 18	177 155 161
	1	7	Katugram ,, Mongolekoto ,, Ranisanj ,,	73,723 73,548 135,646	Ditto		August July December		45 17	January, April and July December	179 184 290	10	172 289
	1 1	9	Kansan,, Assensolo ,,	38,089 98,842	1		August Ditto	:::	83	Slight August	111 310	2 2 5	109 305
	1		District Total	1,391,828	January		December		548	Ditto	8,667	96	3,572
•	2	1	Bankura T.	18,747	l	•	August		19	February, March, July and August.	1	1	
	11	- 1	Bissenpore,	21,283	1		Ditto July		21	March, May, July and August. July	1	1	•••••
	2		Sonamukhi R."O. Bankura R."O. Gangujalghati	12,616 108,804 172,607	January		August November		8 9 59	Very slight July	727 755	13	723 742
Bankura	9	6	Anda ,, Soopore ,,	119,321 99,122	Ditto		September July	•••	32 12	Duto May	760 845	5 3	755 843
	2	8	Raipore Similapal	95,802 82,682	April February		August March	•••	18 12	August Fobruary and March	679 288	5	67 N 283
	1 5	11	Bissenpore ,, Sonamukhi ,	119,595 67,400 78,809	Septomber .		December September August	•••	6 6 18	March, July and August Sught July	514 272 217	13 2 3	501 270 214
	i i		Kotalpur ,,	94,944	January		September	•	31	Slight	463		455
			District Total	1,041,752		•••	December	•••	302	Ditto	5,523		5,462
	!! !	34 35 36	Soori R. C. Dubrajpore	7,848 118,891 126,566	January	•••	April July August	•••	52 28	January and February Sheht	569 431	6 8	563 428
Birbhum	!! :	37 38	Bolpur Sakulipur ,,	107,893 122,723	January Ditto		September December	•••	72	January and April	433 5×9	12 10	421 679
	! :	10	Rampurhat	87,774 88,836	Ditto		May March	•••	77 58	January to May January and February April	346 371	16 9	830 365 512
	Ϋ '	1	Nulhati ,. District Total	138,807 794,428	T	•••	July December	•••	368	January and April	3,273	75	3,198
		12	Midnapore T.	83,560			Ditto	•	32	July	1	1	
	11 .	53 64	Chattal ,,	12,618 12,257	January	•••	April October	•••	44	January] 1	1 1	••••••
	11	45	Ramjibanpora	10,909	Ditto	•••	September		7	January, February, April, June, August and September.	1	1	•••••
		46	Midnapore R. C.	128,546	Ditto	•••	December		61	May and July	1,340	26	1,314
	11 .	47	Binpore Danton	00.704	Ditto	•••	Ditto Ditto	•	83 298	May and June January, March, April, June to August, Nov-	772 620	20 66	752 554
		_		70.126	Ditto		Ditto		29	ember and December.	770	1 11	768
	11	49 50	Dobra Garbetta Gomballubpore	135,786	Ditto	•••	November December	***	62 72	March and July July and December	1,008 1,272	21 11	987 1,2n1
	11	61 62 53	Jhargram Keshpur	59,782	Миу	•••	May	•••	7	May January, July and	807 905	24	605 881
Midnapore	11	51	Narainghar	700 100	1		Ditto	•••	234	August. March te May, July, August, November and	1,017	106	911
-			Solhows	53,617	November		Ditto	•••	21	December.	ł	5	487
	il	55 56	Salboni	901 714			Ditto	•••	0.00	ber. January, March to May, July, November and	745	72	678
	11			#1 45		•••	Ditto	•••	14	Slight	830	_5	384
		57 58	Chundrakons	64,805	Ditto	•••	August	•••	40	January, February, July and August.	i	16	260
		59 60	Daspur Tamluk	I SIN ALU			1 11.4	•••	1 374	tember. October and	406 971		381 238
		61	Maslandpur	80,569	Ditto	•••	Ditto	•,,	. 164	December. January, February, April, May, September, November and Decem-	.1	64	189
		62	Nandigram	. 121,898	Ditto	•••	Ditto	•••	. \$11	ber.	1	43	231

1	\[\frac{1}{2} \]	8	4	5	6		7	8	0	10)
1	اا			olera year.	rs in		ra in		each of	NUMB:	
DISTRICTS.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Bate of first case of Cholera in the circle during the year.	Date of last case of Cholera i		Total deaths from Cholera in the circle during the year.	PRRIOD OF MAXIMUM INTERNITY OF THE DISEAMS AS BEFRESENTED BY MORTALITY.	Number of villages in eather the rural circles.	Affected by Cholera.	Not affected by Cho- lera.
	63	Panchkura	142.081	January 1887	December	1887	192	January to May and December.	618	67	581
	64	Sutshatta	700 554	Ditto Ditto	Ditto Ditto		150 413	January to March and August to December. January to March, July,	247 740	20 116	227 624
	66	Egra	63,417	Ditto	Ditto		140	November and December. January to July, Novem-	376	39	337
Midnapore-	67	Pataspur	OP 904	Ditto	Ditto		199	ber and December. February, March, July, August, November and December	456	47	409
(0.000 and and	68	Raghunathpur	62,124	Ditto	Ditto	•••	200	January, June to August, November and Decem- bor.	895	5 0	345
	69	Bhagwanpur	96,451	Ditto	Ditto		431	January to May, August, September. November and December.	382	91	291
	70	Khajri	42,126	Ditto			143	January, February and October to December.	135	28	107
		District Total	2,515,565	January	December	•••	3,917	January to May, July. August, November and December.	11,758	1,012	13,746
	1 71	Hughli T.	38,718 10,507	January July	2		82	January to May, August, October and December, July	102 17	32	70
	72 73 74	Jehanabad B. C. Balagarh B. C. Polba	48,218 46,178	January	December September	•••	35 25	January and December January and April	159 158	13 8	140 150 63
	75	Hughh »	15,458	Ditto	Normhan	•••	62	January, March, April and Docember, January, February and	77 386	14	367
Hughli	76	Dhaniakhali ,	66,113	Ditto	Downston	***	47	April. Jenuary to April and	186	40	146
	78	Jahanabad	. 99,905 133,300	Ditto	Ditto Ditto		28 40	December. April November	225 226	19 27	206
	1 86	Goghat	111,121	Ditto . January	August December		448	January, April and July January, April and De-	1,808	188	1,620
		District Total		-	, , , , , , , , , , , , , , , , , , , ,		-	cember.			
	81	1	26,496	1	Ditto	•••	142	January to April and July to November	7	7	
	83	1	14,718 5,510	1_	Navamban		10	April, May, July and December, January, March, April,	11	1	
flowerent to] 81		21 620	i litte	. October	***	18	October and November, February, March and	11	4	
Serampore	85		59,184	Ditto	. November		81	September. January to May and	175	21	15
	86	Haripal	84,933	Ditto	. Ditto		121	September. January, February and April.	355	37	31
	87		84,387 55,107	Ditto	D	•••	78 35	January and November, January, February, April and December,	192 172	25 11	16 16
		District Total	. 351,955	January	. December	•••	485	Janusry, February, April and November.	924	110	814
	r 8:	Ilowrah T.	90,813	January	December		295	January to May and	1	1	
	90	Bali ,	14,815	Ditto	. Ditto		56	January to May and July to Docember. January to May, Sep- tember and October. January, March, April, August	9	5	
	91	Domjor B. (128,477	Ditto .	. Ditto	•••	226	November and Decem-	205	67	13
Bowrsh	.{ ns	Jagatballabpur "	77,539	Ditto	. Ditto	•••	138	January to March and December.	167	41	12
	93	Ulubaria ,,	81,345		Ditto	•••	1	January, February, October and December.		36	32
	91		109,068 68,563	Ditto .		•••	108 140	January and December	218	28 39	186
	il se	1 "	69,861	1	. Ditto	•••	186	and December. January to May, November and December.	316	58	250
		District Total	. 635,381	January	. December	•••	1,244	January to May, November and December,	1,496	278	1,21
	() '9'	Suburbs of Cal-	251,439	January .	. December		2,090	January to December	98	58	44
	99	South Subur-	51,658	1_	Ditto	•••	141	1	1	87	
24-Pergunnaha		Paramara	29,982		. Ditto			January to May, August and October to Decem- ber. February to May and	1		
,	11 2	Darunagar *** "	40,002	1	.	•••	1	July to December.	1 -	1 -	1 '

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

1	2	8	4	5	6		7	8	9	10	0
	shown on the		les.	Cholera the year,	olera in		Cholera in the year.		each of	NUMB	
DISTRICTS.	Number of circles of m registration as shown Map.	Names of Circles.	Population of the circles.	Date of first case of Cholera in the circle during the year.	Date of last case of Cholera in the curcle during the year.		Total deaths from Chathe the circle during the	PERIOD OF MAXIMUM INTERSITY OF THE UNIERS AS BEPIKENETHED BY MORIALITY.	Number of villages in the rural circles,	Affected by Cholera,	Not affected by Cho-
	100	Rajpore Town	10,576	January 1887 .	. December 18	87	13	January, March, June, August to October and	8	6	
	101	Agarpara ,, Nowahgunge ,,	22,739 18,018	Ditto . Ditto .	•		47 38	December. January, March, April and August to October. January, April, May,	18	12	
	!	N-thesi	21,533	TO LAL.		1	23	July to October and December.	11	•	****
	103	Naihati ,,	20,450	Ditto .	D.11.		23 27	January to May and October, January to April	27 19	11	
	105 106	Baduria, Talligunge Rural	19,135 47,793	Ditto Ditto	December	:::	17 42	January, June and July January to Merch	18 143	18	1
	107	Atcheepur ,, Vishupur ,,	62 536 71,717	Ditto .	Ditto	:::	40 177	January and February January to March and December	178 250	25 80	,
	109	Sonarpur ,,	31,858	Ditto .	Ditto		69	January to March, No- vember and December.	162	24	
	110	Bhangor ,,	78,852	Ditto .	Ditto		239	January to April, Sep- tember, November and	317	64	
	111	Barripur "	75,830	Ditto .	Ditto		114	December, January to May, August and December,	352	20	
	112	Jamagar ,	76,140	Ditto .	Ditto		267	January to April and December.	228	80	
Persumuaha -concluded.	113	Canning ,,	47,518	Ditto . Ditto .	1	••• !	413	January to May, November and December.	240	48	
tonetadou.	1114	Dum-Dum ,, Barrackpore . ,,	31,578 21,660	February .			71 26	January to May, July, October and December. February to April.	75 63	18 10	
	116	Nashati	55,420	January	December		61	January, March, Octo- ber and November.	183	12	
	117	Baraset ,, Deganga ,,	78,181 68,516	Ditto	. June December	•••	52 130	January, March and	282 154	21 14	
	119	Habara, Basirhat,	75,429 55,887	1 11.000	Ditto	•••	138 142	January to May January, March and	252 165	23 84	
	120	Hosainabad ,	67,227	73744	litto		881	April. January to May, Sep-	189	43	
	122	Badura ,,	104,606		July December		51	January to May, and	196	29 39	
	123	Haroa ,,	49,292 52,828	77.140	Ditto		231	October to December. January to April, Nov-	202	32	
	125	bour. Kalpi	90,319	10:44	Ditto	•••	444	January to May, Nov-	427	67	
	1 126	Debipur	43,455	Ditto	Ditto		109	ember and December. January to June, Nov-	259	24	
	127	Hankipur .,	107,275	Ditto	Ditto	٠.	585	omber and December. January to May and December.	382	27	
	128	Mathurapur "	50,453	Ditto	Ditto		227	January to March, May, November and Decem-		20	
		District Total	1,869,859	January	December	•••	0,665	January to May, and October to Decomber.	5,480	856	4
	129	Kishnaghur Town	27,477		December		20		1	1	
	131	Nobadwip	14,106 8,683 2 9,687	April	November April December	•••	6 4 40	April February,	1 1	i	:
	132	Santiporo ,,		-		••		November and Decem- ber.		_	1
	133 134	Kushtia Meherpore Kishnaghur Rural	9,717 5,731 77,887		June December	••	149	April to June January, April and De-	1 1 170	30	-
	136	Kishnaghur Rural	45,840	Ditto	June	•••	65	cember.	94	81	
	137 138	Kishenganj ,	32,701 63,509		November Ditto		58 208	January and February	48 109	24 32	
	189 140	Nakashipara , Kaliganj , Ranaghut ,	59,762 54,192 75,732	Ditto	December April December	•••	64 12 78	January to March Slight January, February,	128 100 190	15 11 22	
ddes		Santipore	24,177 64,020	Ditto	Ditto		27 64	January and December January, May and De-	57 161	8 18	
	143	Claugda ,,	38,306	Ditto	April	•••	73	cember. January April and May	92	9	
	145 146	Kushtia,	17,726 98,247	March January	May December		20 176	April, May, July and August.	22 246	6	
	147	Doulatpur ,, Naupara ,,	74,178 136,713	Ditto	May October		26 340	January	124 220	10 59	
	149 150	Bhaluka, Bhadulia .,	41,929 68,184	I IA. Lancas areas	July October	·	255 307	April to June April to June, August and October.	111 137	85 25	
	151	Chuadanga ,,	21,818	January .	December		11	January, August and November.	87	4	
	10.			Ditto .	Ditto		137	January, February and	150	20	1
	152	Alamdanga ,,	89,947	1	1			June to September.	1	i	1
	11	Alamdanga ,, Damurhuda ,,	63,014 39,396	Ditto	Ditto	•	141	June to September. January, November and December. January to March, Nov-	113	38	

App. II.]

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

1	3	8	4	5	6		7	8	9	10	
·	uary n the			hclera e year.	Cholera in	Ì	ear.		each of	Number	B OF
Districts.	Number of circles of mortuary registration as shown on the Map.	Names of Circles.	Population of the circles.	Date of first case of Chelera in the circle during the year.	Date of last case of Chol-		Total deaths from Cholers the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DIREASE AS REPRESENTED BY MORIALITY.	Number of villages in the raral circles.	Affected by Cholera.	Not affected b Cholera.
Nudde n-con- {	155 156 157	Jibunnagar Rural Meherporo ,	40,120 65,954 89,160	January 1887 Ditto Ditto	Ditto November	 	66 91 83 46	January, November and December. January, April, Nov- ember and December. January, April and May January	77 112 140 201	9 18 26 18	68 94 114 188
	158 159	Gangni ,, District Total	1,655,721	Ditto January	August		2,674	Ditto January, February, April and May.	8,071	616	2,455
	160	Jessore Town Jessore or Kot- Rural	8,405 158,859	March	Dutto		5 261	March, April and De- cember, January to May and Do- cember,	11 414 190	1 55 40	10 850
	162 163 164	Monirampur	63,902 155,611 67,420	Ditto			370 131 63 87	January to June January, March and April January and December January	348 147 231	37 32 23	150 311 115 208
	165 166 167 168 168	Kerhubporo ,, Jhenida ,, Kotellandpur ,,	102,627 44,038 138,305	Ditto Ditto Ditto Ditto Ditto	October April March November	•••	106 21 52 75	January and March to May. February January and February April and May	1	5 5 9 14 12	291 84 301 108
Jessorė	170 170 171 172	Harmakundo 5, Magura 17	41,865 159,162 50,464	Ditto .	December Ditto	•••	60 215 176	May. January, March to June and December.	132	35 31	418 101 285
	173 174 175	Narail ,.	83,677 151,302 72,947	Ditto . Ditto .	December	•••	45 558 207	January to May and December. January, March, April November and Decem-	369	103	286
	170	1	103,863 59,668		., Ditto ., April		325 36	ber. January, March to May and December. January, March and April.	139	10	200 121
	179 179 18 18	Ganrapota	50,223 61,052 112,137 79,046	February January	January June December April	 	17 19 189 29	January March	145 216	7 95 7	10: 13: 19: 11:
		District Total	1,939,375	January	December	•••	3,047	January, March to May		-	4,10
	18 18 18	3 Kandi	30 271	Ditto	Cotober February August December		5 7 24 5	Slight anuary and February March and May March, May, July and	1	1	
	18 18 18 18	Barwan Rura 7 Jehnghi , 8 Daulatbazar ,	67,912 108,508 89,568 8,345	January Ditto Ditto March	January May April March	: : :	15 7 23 1	March	213 115 50	3 4 1	15 21 11 4
	19 19 19 19	Gotabizar	72,633 78,423 5 7,135 47,659 79,644	Ditto Ditto Ditto Ditto	November May Ditto January March April	••• ••• •••	3 84 77 21 23	January and April January, April and Ma January	220 124 81 302	23 18 8 8	20 10 7 29 9
Murshedabad	15	Khargaon , Assanpur ,	42,446 108,025 54,018 11,177	Ditto Ditto June	October August	•••	146	January to March January to March and August.	281 176 122	19	21 15 11 24
	20	Kahanganj Shahanagar Manullabnzat	57,238 37,200 9,523 1,978 27,858	Ditto April	April April Ditto	•••	107	May. January to April April January, March and	. 170		18 17 6 14
	20	Sagardighi Raghunathganj Downnerai	57,269 55,036	August January	August May	•••	79	January, February, Apr and May.	1	9	14 22 18
	1 2	Shamshergang , Suti , Mirzapur ,	1,226,796	April February	June Ditto Ditto December	•	78	April and June February and March	. 184	17 5	3,46
	- 11	09 Khulua Tow		1	September	••	. •	July to September. January, February and May.	1 10	6	
Khulna		Khulna Bur 212 Dumuvia "	127,21:		December		. 201	April, May, November and December. January to April, Jun and July.	n 294	84	21
	1) :	Buitaghata ,,	87,50	Ditto	October	••	. 22	January to April and July.	1 12	80	'

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

1		2	3	4	5	6		7	8	9		10
District	rs.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	at case of Cholera de during the year,	rese of Cholers in		Total deaths from Cholera in the circle during the year.	PERIOD OF MAXIMUM INSTRUMENTY OF THE DISTANCE AS REPERSENTED BY MORTALITY	vilages in each of ircles.	тно	by Cho-
		Number of registratio		Population	Date of first in the circle	Date of last the circle		Total deatl		Number of viliages the rural circles.	Affected by Cholera	Not affected lera.
		214	Paikgacha Pural	70,478	January 1887	Decembor	•	229	January, March to July, September, November and December,	240	31	200
Khulna—sor	12-	215 216 217 218	Bagirhat ,, Mollahat ,, Rampal , Moreilganj ,	137,818 50,478 49,827 62,670	Ditto Ditto Ditto	Ditto September	•	80 177 171	January to May and Decomber. January and April January to April January to June	347 121 178 203	87 31 37 66	90 141 147
cluded.	1	219 220 221	Kalarua ,, Magoora ,,	87,876 81,398 48,212	Ditto Ditto Ditto	December May	•••	38 64	January, March and April, January and April January, February and	193 150	7 11	186 139
	l	222	Assasuni ,,	62,412	Ditto	December	•••	109	April. January, March to May, November and Decem- ber.	122 249	11 43	111 206
	Į	223	Kaliganj ,,	146,130	Ditto	Ditto	•••	169	January, April, November and December.	431	48	393
			District Total	1,079,949	January	December	•••	2,270	January to May and December.	2,890	601	2,289
	ĺ	224 225 { 226	Dinajpur Town Dinajpur or Rajarampore Birganj ,	12,560 199,826 189,891	Ditto	January August May	•	112 257	January February and April April and May	731 441	1 25 2 0	706 421
		227 228 229	Thakurgaon Ranisankail Pirganj,	220,397 75,102 93,880	Ditto Ditto	July January May	 	95 8 7	Ditto January Very slight	931 195 352	20 1 1	311 194 351
Dinajpur		230 231 232	Hemtabad ,, Nawabganj ,,	85,287 61,637 94,482	April January March	June January June		8 4 23	Ditto Ditto April	829 468 483	5 1 5	324 467 477
	j	233 234	Bansibari ,, Patnitolla ,,	81,877 69,238	April	May August		20 3	May Shght	620 513	7 1	613 51 2
	- !	235 236	Mohadebpur ,, Porsha ,,	07,265 48,586 70,661	March April Ditto	April Ditto November	•••	10 15 11	April Ditto Ditto	430 305 684	3 4 2	427 801 682
	Į	287 238 239 240	Gungarampur ,, Chintaman ,, Parbatipur ,,	74,401 52,058 66,708	January March	July December	•••	17 58	January and April April, September, November and December.	443 381 215	 6 9	413 375 206
			District Total	1,514,346	January	December	•••	649	April and May	6,921	111	6,810
	[241 242	Beauleah Town Beauleah Rural	19,791 81,096	February Ditto	Decomber		15 15	February, May, July and September, May	47 422	11 5	36 417
		243 244	Tanore ,	85,609 43,799	March	Do. Juno		21 40 6	May and June	395 332	3 9	392 323
Wasaha hasa		245 246 247	Putia Charghat Baghmara	121,238 134,160 121,581	March January Ditto	April December June	•••	49 41	Very slight January and November January and February	295 307 461	5 7 7	290 300 454
Hajshahye		248 249	Nattore	153,662 112,607	Ditto	November December	•••	54 70	April January and May	405 576	18 20	387 566
		250 251	Burigram ;	121,554 84,962 85,840	Ditto Ditto Ditto	May April January	:::	48 22 11	January Ditto Ditto	356 248 346	12 5 7	344 243 359
	- !	252 253 254	Naugaon ,, Manda ,, Panchupur ,,	108,308 79,431	Pitto Ditto	May Ditto		52 45	January and April January	625 391	12 18	613 373
	,		District Total	1,338,638	January	December		489	January	5,206	139	5,067
	ſ	255 256	Rungpur Town Maiganj Rural	13,320 116,210	January Ditto	May Duto	:::	34 177	April January, April and May	728	1 41	687
		257 258	Kaliganj ,, Nishetganj ,, Kumarganj ,,	155,607 124,507 88,619	April March January	August September November		335 288 210	April to July April and May April, May and Novom-	886 327 139	83 80 24	358 297 115
	i	259 260	Mithapukhar ,.	99,053	April	April		14	ber. April	461	3	458
	- 1	261 262	Pirganj ,	69,008 138,762 163,672	January March February	May July November	:::	36 440 111	April to June April and May	894 59 144	8 18 19	886 41 129
Rungpur	{	263 264 265	Jaldháká ,, Darwani ,, Barabari ,,	143,390 142,512	January Ditto	June August	•••	322 176	April to June	185 742	22 46	163 696
	-	266	Nageshwari ,,	177,229 215,213	Ditto	July October	•••	462 883	January, February, April and May, January, February and	544 1,096	55 68	493 1,028
	i	267 268	Ulipur ,, Govindganj ,,	189,027	Ditto	December	•••	64	January	897	10	897
		269 270	Bhowanigan; Sadullapu ,	57,803 112,563	Ditto Ditto	April October June	•••	37 270 173	Ditto January, April and May Ditto	80 849 197	19 50 30	61 299 167
		271	Sundarganj District Total	2,097,964	Ditto January	December		3,082	January and April to	6,787	477	6,200
	ſ	272 273	Bogra Town Bogra Rural	6,170 216,750	March January	May December		33	March and May January	21 979	3 12	18 967
	1	274 275	Sheraur Sharakandi	47,403 103,228	March January	March January	;	1 13	Very Slight January	284 433 809	, 1 5	283 429
Bogra	∤	276 277	Khetlal ,. Sibganj ,. Adamdighi ,.	40,023 50,080 94,534	January	Мау		21	Slight	446 617	9	309 446 608
		278 279 280	Panchbibi Nawabganj	66,724 39,374	April	April			April	559 327	1	559 326
	į	281	Dhunst ,,	61,008	May January	May December	***	94	May Slight	4,229	35	4,194
			District Total	734,358		100 FW 000				2,440	- 35	-,.04

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

= = 1	2	3	4	Б	6	7	8	9	10
	<u> </u>			l Cholera the year.	of Cholera in the year.	Cholera in the year.		in each of	NUMBER OF TROSE
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles	Date of first case of in the circle during	Date of last case of C the circle during th	Total deaths from C the circle during th	PREIOD OF MAXIMUM INTERSITY OF THE USEASE AS REPRESENTED BY MORTALITY.	Rumber of villages i the rural circles.	Affected by Cholera. Not affected by Gliera.
Pubna	282 243 284 285 286 287 288 289 290 201	Pubna Town Seragganj Rural Pubna R	21,037	January 1887 March January Ditto January Ditto Ditto Ditto January January January	November Ditto Ditto Ditto Ditto Ditto June Pecember A ovember December	19 23 111 88 223 100 451 106	January and November May Slight April and December April, May and December April and May March to May April and May April and May April, May and December	547 550 528	3 11 10 8 26 477 18 417 58 21 60 48 4 54 6 52
I)arjiling . ·	202 293 294 295 296	barding Rurat Kalimpong ** Kurseong	7,976 45,300 12,683 26,937 63,241	June	December September November)	Ditto	32 84 787	5 5 8 2 3 75 11 90
Julpaigur:	29° 29° 30° 30° 30° 30° 30° 30° 30°	Julpaguri Rural Silliguri	1	April March	June May September Ditto July November June July	14 27 27 19 29 21 27 21 27 27	September. Rebruary to June May March to May April, May and July March to July August August August March to July March to July March to July March to July March to July March to July March to July March to July	41 280 484	12 6 2 28 4 16 23 6 15 29
D acca	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Ducca Town Natainganj Nata	12,501 164,287 119,518 174,831 160,236 91,138 209,73 2+ 184,19 143,01	Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	December Ditto Ditto Ditto Ditto Ditto Ditto Ditto September November December December Ditto Ditto November	2 1 5 1 3 1 3	January to Apr August, November an December. January, February an April. January to May January to May January to May January to May and May. January to May and December. January to May and December. January and Pebruary January and Pebruary January April, May and December. January and March May.	ad 51 ay 56 68 pril 36 nd 68 66 64 y and 4 y and 3 to 2	5 16 68 64 44 84 80 92 155 42 44 178 1178
Բ ոււմ ի ս։	:	S24 Maksudent S25 Bhunga	107.4 107.4 100.2 156.5 164.5 165.5 166.5 17.5 166.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	53 January 58 Ditto 515 Ditto 5267 Ditto 5389 Ditto 5341 Ditto 5341 Ditto 5341 Ditto 5351 Ditto 5361 Ditto 5361 Ditto 5361 Ditto 5361 Ditto 5360 Ditto 5366 April	December December Ditto August June December Ditto Ditto November July December July July July Documber July Documber July Documber Ditto		Good January to May Good January May, Oct and December. January and March May. January February May. January, April and January to May January to May January to June January to Way January to June January to June January to June January to June January to June January to June January to June January to June January to June January to June January to June January to Way Wey Sight January to May January to May	and May	71 1,281 7 7 2 201 17 299 30 457 24 482 122 516 68 396 75 478 102 147 59 191 53 217 75 517 76 548 43 271 1 ,326 747
Backergan		334 Barrisal' 535 Barrisal' 336 Jahlesati 337 Nalchuti 348 Backerganj	Town 18 Hural 113 145 75 75 131	,186 January ,733 Ditto ,46 Ditto ,66 Ditto ,5396 Ditto ,711 Ditto	May December Ditto Ditto Ditto Ditto		March to May January to May January to May January and Mar June. January to July January and Mar May.	ch to	1 1 296 67 342 98 239 74 238 108 881 137

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

1	2	3	4	5	6	1	7	8	D D	:	10
Districts.	Number of circles of mortuary registration as shown on the Map.	Names of Circles.	Population of the circles.	Date of first case of Cholera in the circle during the year.	Date of last case of Cholera in the circle during the year,		Total deaths from Cholera in the circle during the year,	Period of Maximum Intensity of the Disrabe ab Empersented by Morjality,	Number of villages in each of the rural circles.	Affected by Cholers.	
Sackerganj	840 341 342 343 844 845 346 847 848 849 850	Gaurnaddi Rural Perozepur Matbar Surupksti Bhandaria Patuskhali Gulsakhali Gulsakhali Gulachupa Bhola Barhanuddi	184,192 117,038 96,032 169,284 73,352 173,801 95,188 98,732 69,037 125,169 89,061	January 1887 Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	Ditto Ditto	7	200 303 608 349 712 1,367 284 750 446 141 160	January to May January to June January to June January to May January to June January to June January to June January to June January and May January to April	485 212 187 448 68 802 146 809 204 201 207	95 113 98 108 52 70 39 87 25 45	890 129 89 340 16 282 148 222 170 156
	351 352 353 354 355 3 6 357 358	District Total Jamalpur Town Kishorganj Atha or Tangail Bural lshwarganj Galfargaon Ph. lpur Netrakona	1,900,889 16,091 12,898 18,124 282,846 229,452 117,759 114,467 471,658	January April January Ditto Ditto Ditto Ditto Ditto Ditto	August November December June December		8,885 ; 37 ; 12 ; 314 ; 209 ; 140 ; 68 ; 805 ;	January to Juno Very slight January to April, June and December, January, April and May January and April to June, January to April January to June April and May January to Muy and	4,336 68 49 25 1,213 1,190 460 780 3,203	1,251 1 26 6 90 71 52 56 934	3,085 67 23 19 1,123 1,119 408 754 2,869
dymensing	361 362 363 364 365 366 337	Durgapur, Jamalpur, Sherpur, Dewanganj, Kishorganj, Nikh, Nikh, Gopalpore,	116,457 193,238 187,065 101,372 122,706 209,258 122,469 442,119 217,736	Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	August December		1 120 42 102 142 673 216 282 550	December, Very sight February, May and June. January and May March to June and December, Junuary to April January, April and May January, April and May January, Kebruny, April to June and De-	014 717 1,016 267 589 667 496 1,523 1,171	1 46 17 27 81 144 64 123 129	913 671 990 240 508 523 432 1,400
'hittagong ≺	369 370 371 372 373 374 375 376 377 378 379	Pingna	76,262 3,051,906 92,130 53,022 143,360 76,719 68,611 101,758 147,515 104,500 180,148 81,830 62,817 29,168	Ditto January January April January February Murch April Ditto August February April Ditto Ditto Ditto Ditto	December December Ditto April December Ditto Ditto Ditto Ditto February December		3,911 9 1 14 46 82 145 77 27 39 1 274	cember. January to June and December. January to May and Do- cember. January and October Very slight Slight December Rebruary and March May to July, November and December. October and December May and December December December Lecomber December and December April to June and December. April to June and November.	318 14,676 26 26 124 110 128 195 105 121 63 80 27	1.346 6 1 4 5 7 15 12 7 7 1 1 28	220 13,330 90 95 120 119 101 113 183 94 214 62 52
Yoakhalı	381 382 383 384 385 386 387 388 388	Chakariya ,, Teknaf ,, District Total Sudharam Town Sudharam Rural Lakshnepur ,, Ramganj ,, Begumganj ,, Bannu ,, Sandup ,,	38,825 30,548 1,132,341 5,124 90,184 113,321 80,742 128,933 41,731 72,407	January January February January Jitto Ditto Ditto Decomber February	June December February June December July May December Dutto		1,377 1 9 139 64 69	April and June to becomber. January and April to June. April, May, August and Cetober to December. February	1,890 1,890 5 426 382 430 510 46 82	139 17 28 31 21 17	26 95 1,251 4 419 354 389 489 46 75
hpperah	390 301 392 393 394 395 396 397 398 398	Hattia	40,295 132,607 109,278 820,772 13,500 17,543 125,879 78,521 143,222 162,322	January Ditto	Ditto Ditto Ditto Ditto		5 18 175 488 87 16 207 58 672 316 29	January Slight January January and April January April and May January and March to May January to May January to May January to May January to April January to April	89 413 246 2,628 22 20 686 550 6.9 545 638	10 52 139 7 7 7 39 27 228 38 15	2,489 15 15 13 647 523 431 507 623
	400 401 402 403 404 405	Lakshum Brahmanberia Kasha Nabinagar Chandpur Hajiganj District Total	86,572 223,751 114,152, 175,971 112,934 172,347 1,519,338	Ditto Ditto Ditto Ditto Ditto Jitto January	Ditto November May December		81 336 327 471 222 225 2,975	January to March January to March January to March January to May Ditto January to April January to May	654 597 424 862 870 954 6,481	27 51 70 78 73 72 732	627 646 354 284 297 683

App. II.]

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

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1	2	8	4	5	6	i i		5 0	Numbi	
J) is TRICTS.	Number of creeks of mortuary rekistrations as shown on the Map.	NAMES OF CIRCLES.	Population of the circles,	Date of first case of Cholera in the circle during the year.	Date of last case of Cholera in the circle during the year.	Total deaths from Cholers it the circle during the year.	PRRIOD OF MAXIMUM INTENSITY OF THE DISEASE AS ESPHESENTED DY MORTALITY.	Number of villages in each the rural circles.	Affected by Cholera.	Not affected by Cho-
	406 407 408 409	Patna Town Hehar ,, Dinapore ,, Barrh , Patna Rural	160,237 48,971 52,225 23,610 27,674	January 1887 May June February	December 1887 Ditto Ditto November July	753 78 58 42	January to December July to November August and December May to August and Octo- her. April and July	nished	187 22 8 4	15 4 fui 29
Patna	411 412 413 414	Bankipur ,, Bikram ,, Massaudh ,, Dinapore ,,	97,001 180,362 120,613 15,587	January April May Ditto	November September December	140 596 268 102	January and May to August. May to September May to August May to August and December.	360 671 616 114	66 51 51 21	62 56 9
	415 416 417 418 419 420 421 422	Maner , Barrh , Mokaneh , Fatuha , Behar , Silno , Attasarai , Hilsa ,	98,516 170,589 93,824 88,051 293,312 91,477 78,932 176,075	April Ditto February January May Mar th January April	September October Ditto September November Ditto Ditto October	151 216 217 326 333 706 534 759	May to September May to August	571 160 811 775 341 425 920	87 20 17 49 72 205 254	53 14 29 72 20 22 66
		District Total	1,758,856	January	December	5,292	April to August	5 ,959	1,007	4,86
	426	Gya Town Dandnagar Rurat Sherghati ,	76,121 0,870 215,392 162,819 78,516	January May March April May	November August October Ditto December	068 36 1,303 2,206 735	February to October May, July and August April to September April to October May to August and December.	1 668 769 862	1 134 239 54	55 53 St
Gys	428 429 430 431 432 433 434 435 436	Tikari	176,805 96,211 245,420 92,296 98,446 274,754 110,485 591,715 96,775	April Ditto March Ditto April January May May April	October August November Ditto Ditto Ditto December November Ditto Soptember	2,091 489 3,869 619 1,018 1,872 691 1,241	April to September April to September April to September March to August April to Cetober May to September May to September May to September May to September May to September May to September	421 599 837 267 499 595 230 980 302	142 37 362 85 91 194 83 114	27 56 47 18 40 40 14 86 21
		District Total	2,124,682	January	December	17,119	March to September	6,531	1,546	4,91
{	437 438 439 440 441 442 443 445 446 447	Arrah Town Buxar Domraon Arrah Belauti Piru Buxar Domraon Sasserum Kharghar Dhangain Li cee Liaboa	43,465 17,608 17,608 17,073 185,179 144,587 242,103 155,760 104,647 179,916 78,884 171,828	February Ditto April Francy Ditto Ditto Ditto Ditto Ditto March Ditto January April March	November October Ditto November November Ditto December October Ditto November October Octot er September November November	299 80 295 1,305 941 832 1,107 1,852 2,031 1,073 1,479 745 1,334 694	May to September February to August April to August April to October May to August April to October April to October May to October April to September April to September January, June to September and November, April to October March to September March to October March to October March to October March to October March to October	11 1 507 247 595 416 479 653 564 594 240 821 584	10 1 196 46 40 76 219 105 109 83 55	54 54 55 54 55 55 55
Į.	450	Mohania ,	150,413	Ditto January	December	14,067	April to October	5,673	996	4,6
	451 452 453 454 455	Mozufferpore Town Situmach ,, Huippur ,, Lalganj ,, Mozufferpore Rural	42,742 6,125 25,695 16,783 500,596	January July March January February	November July November October December	26 60 307 652	March to July July April, May and July January, April and June to October. May, June and September. May to October	1 1 1 1,057	1 1 1 1 44 59	1,0
Mozufferpore	461 462	Paru " Kutua " Sitamarhi " Pupi " Sinhar " Happur " Mahua " Lalgau "	288,957 187,340 463,137 222,516 146,110 244,530 310,444 127,079	Ditto	Ditto	1,864 1,428 588 1,270 869	May to October April to July, October and November. April to August May to September May to September May to October May to October April to June, August and September, August	212 150 594 652	125 91 74 90 39	4 1 2 6 5
`		District Total	2,582,060	January	December	7,186	May to October	4,374	-	8,1
!	464	Purblanga Town	66,096	January	December		January, March to August and October to December.		1	
Durbhanga	466	Therbleinga Rural Roshera	337,428 256,605 309,875	February	December	179	June to August	758 627	13 21	
	168		306,493 279,504		()otohor			907		

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—continued.

1	2	3	•	5	6	7	8	9	1	0
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cholera in the circle during the year.	Date of last case of Cholera in the circle during the year.	Total deaths from! Cholers in the circle during the year.	PERIOD OF MAXIMUM INTERNSITY OF THE DISEASE AS REPERSENTED BY MORTALIY.	Number of villages in each of the rural circles.	Affected by Cholers.	
Durbhangu— { concluded.	470 471 472 473 474	Nagarbasti Rural Madhubani , Khajauli , Benipati , Phulparas ,	169,946 211,772 151,540 273,742 270,451	January 1887 Ditto April Ditto January	October 1887 December October December Ditto •	1,133 1,285	July to September May to August April to October Ditto March to September	313 650 529 765 982	23 27 54 84 39	290 023 471 681 943
		District Total	2,633,447	January	December		May to September	6,359	890	5,969
	475 476 477	Chuprs Town Sewan , Revilganj ,	63,249 13,307 12,493	March May January	October September	75	June to October May to August January and April to October. April to September	14 3 8 506	14 8 5	 3 875
Sarun	478 479 480 481 482 493 484 485	Chupra Rural Manjhi Mashrak Parsa Sewan Bassentpur Gopulganj	190,265 146,722 220,462 239,072 120,231 302,081 222,618 211,476 200,385 284,681	April Ditto May Ditto April April May Into April April April	October December August September Ditto October November October November October	748 30 261 199 1,820 1,173 940 725	June to October Slight May to August June to August June to Reptember May to September Ditto May to October Ditto	233 270 523 178 573 552 390 469 859	62 6 45 34 178 90 67 56 119	171 264 478 144 895 462 828 413 740
`	487	District Total	2,280,382	January	December	7.004	May to September	1,578	810	3,768
	498 489 400 491	Bettiah Town Bettiah Rural Bagaba Lauria ,,	21,263 349,972 140,900 191,917	April March April March	August October August September	2,463	May to August March to September April to August April to July and Sep- tember.	1,684 655 632	1 152 98 150	1,532 557 676
Chumparun	492 493 494 495 496 497	Motihari " Govindganj " Dhaka " Kasarya " Adapur " Mudhuban "	176,748 165,062 265,992 177,682 138,986 105,086	April Ditto Ditto Ditto Ditto May		1,226 2,323	April to September Ditto April to October May to September April to September Slight	H92 7.46 777 1,052 522 615	68 83 123 61 90 3	824 653 654 991 432 612
		District Total	1,721,608	March		12,929	1	7,766	835	6,931
(498 499	Monghyr Town Jumulpore ,	57,520 13,563	March Ditto	hand any burn	122	March, April, July and September.	76 12	8	31
Monghyr	500 501 502 503 504 505	Shekhpura Rural Jamaipore (Gogri) Kharakpur , Supaigarra , Begu Serai ,	12,517 81,736 6,261 365,954 143,079 166,263 379,794	January March January May January	October Suly November August	135 2,84 431 13	Slight	1 100 6 315 325 288 508	1 9 143 47 34 71	91 6 172 278 254 437
	506 507 508 509 510 511	Tegra ,, Shekhpura ,, Shekandra ,, Jamin ,, Chakai ,,	203,032 186,963 122,389 120,563 109,540	Ditto April May Ditto	November Intto September August July	83 1,32 31 32 32	April to August June to August May to August May to July	218 357 138 510 901	48 141 18 52 32	200 216 120 458 969
		District Total	1,969,774	January February		6,81	-1 "	3,875	- 638 34	3,237
	512	Bhagulporo Town Bhagulporo Eural	57,453 100,379	May	October	60	October to Decomber.	819	49	270
	514	Kumarganj ,,	08,427	Ditto	Į.	20	May to August and Octo- ber.	204	11	190
Bhagulpore<	515 516 517 518 519	Kolgong ; Bihipur ; Supul ; Pertabganj ; Bongong ;	102,237 98,403 299,042 153,272 148,560	February January Ditto Ditto	July August July Octobor	243 85 93 1,600	May and June	359 70 317 186 318	33 17 59 96 8	325 53 258 90 310
	520 521 522 528 524	Madehpur , Kissenganj , Sanka , Amarpore , Katuria ,	262,678 185,328 134,227 208,508 77,644	March February March May March	August December Ditto		May July and August June to September Very slight	172 284 295 567 95	40 6 11 40 2	132 280 284 527 93
,	1	District Total	1,966,158	January	1	4,26	-	3,248	409	2,839
	525 526 527	Purneah Town Purneah ,, Kasba Amur ,,	15,016 138,704 124,889 109,391	Ditto	September June October	4 17	May. May April and May April, May and October	267 364 168	6 16 8	261 349 160
Purneah	528 529 530 531 532	Dhamdaha ,, Gondwara ,, Arrarea ,, Matiari ,, Kaniganj ,,	123,945 200,012 94,115 107,552	Ditto Ditto Ditto	August Ditto Ditto November	20 17 49	January, April and May April to August April to August and October.	144 334 204 126	21 31 14	140 518 178 119
	533 534 535 536 537 538	Kissenganj ,, Bahadurganj ,, Kulaganj , Kadwa , Balarumpur ,, Manihari ,	158,100 196,142 277,059 184,275 115,031 54\$456	April January Ditto	July July July July	2 1 3 34 4	7 Slight 8 January 2 January April and May January	279 871 562 809 862 132	1 7 21 6 11	370 555 288 356 121
		District Total	1,848,687	January	December	1,57	January and April to	3,626	155 C	3,471

1	2	3	4	5	6		7	8	9	10	· ·
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cholera in the circle during the year.	Date of last case of Cholers in the circle during the year.		Total deaths from Cholera in the circle during the year.	PRRIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in each of the rural circles.	Affected by Cholers.	
Maldah	539 540 541 542 543 544 545 546 547 548	English Bazar Town Ditto Eural Muldah Gajol Ratna Gomastapur Kallinchak Shibganj Nawabganj District Total	12,430 72,616 50,494 54,317 80,021 108,651 52,810 115,692 102,162 66,453	May 1837 January Ditto Ditto Ditto Ditto Yellow January January January	July 1887 Ditto Ditto May Juno Ditto May November May July November		3 237 26 26 26 122 90 83 69 31 78	May January to May March and April January and April January and April January and March to May January and June April and May Ditto January and March to May,	38 215 333 586 393 541 248 280 241 235	\$ 41 5 9 29 20 25 18 15 13	35 174 328 577 364 521 223 284 226 222 2,932
Sonthal Per- gunnahs	549 550 551 552 553 553	Deoghur Town Dumka Rural Rajmahal " Pakur " Deoghur " Co-da " District Total	8,005 363,186 253,825 204,019 389,665 348,493 1,568,093	Fobruary May January March Fobracy May	June August December Ditto October Ditto Decomber		34 43 190 61 222 77	February to June Slight May and July March Murch, May and August Slight	1 2,909 3,117 1,251 2,218 1,758 11,254	1 16 42 28 81 10	2,893 3,075 1,223 2,157 1,748
Cuttack{	558 556 557 558 569 560 561 562 563 564 565 566	Cuttack Town Kendrapara Jajpur Sathpur Jaggatsingpur Tirtola Kendrapara Patamundi Jajpur Jajpur Dharanisala	43,239 15,697 11,233 155,335 56,900 249,979 215,001 183,677 175,323 100,401 91,015 239,503	January Ditto Ditto April January Ditto Ditto Ditto Ditto January January	November July September December October Ditto October December August July December		108 26 26 694 505 639 892 216 456 48 871 332	January and July to October. January. April and July to September. January and June to December. May to October January and July to December. January and July to October. January and July to October. January and July to October. January and July to October. January to April and July to September. February and March January to June January to June January to June July, August, November and December. January to June July, August, November and December. January, May to Auwist, November and December.	128 64 83 364 195 780 1,282 1,098 1,576 720 573 763	42 16 18 123 53 176 143 56 122 23 126 88	86 48 65 241 142 604 1,139 1,042 1,454 697 447 666
Puri {	569 569 570 571 572 573	District Total Pur: Town Ditto Rural Pipl: , Gope , Khurda , Bhanpur ,	1." 197,549 226,782 116,167 269,478 63,927	February January Ditto Ditto Ditto Ditto	Decomber Ditto Ditto Ditto Ditto		4,671 416 2,825 1,470 294 2,569 1,085	bor. January to December February to August and October to December. January to September, November and December. January, March to September, November and December. March to May, July, August and October to December. January, March to September, November and December. January and March to December. January and March to	9,165 1 1,317 1,581 953 805	1,154 1 469 345 83 895	8,011 848 1,236 870 410
Balasore	574 576 576 577 578 579 581 582 583	Basudevpur	\$88,487 20,205 87,420 107,508 55,102 88,228 71,196 169,972 71,364 132,321 51,920	Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	December Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto		8,668 121 313 502 304 720 882 858 156 563	January to December March to August, November and December. January, March to August, October and November. March to July and December. January, March to August and December. January to August November and December. January to July, November and December. January to December. January to December. January to December. January to December. January to December. January to September, November and December. January ro September, November and December.	567 475 1,340 477 867	1,413 24 109 151 67 165 98 206 50 143	3,753 15 472 1,170 358 402 377 1,134 427 724
		District Total ,.	. 945,280	January	December	•••	1.000	-i	6,432	1,116	5,31

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Statement are fixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1887—concluded.

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	a cn the		·sə _•	case of Cholera during the year,	Cholera in the year.		holers in year.		in each of	NUMBE THOS	K
DISTRICTS.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of in the circle during	Date of last case of Cho the circle during the		Total deaths from Cholers in the circle during the year.	PRRIOD OF MAXIMUM INTERNITY OF THE DISEASE AS REPERSENTED BY MORTALITY.	Number of villages in the rural circles.	Affected by cholera.	Not affected by cholera.
Huzaribagh {	584 585 586 587 588 580 590 691 593 594 596 596 597 599 600	Hazaribagh Town Ditto Rural Chatra	15,306 87,718 64,018 59,502 37,029 47,034 70,437 53,503 52,054 56,954 72,953 55,780 53,375 86,007 86,007 86,007 87,3002	April May April May April May April March March March Juno Juno Juno Juno Juno Juno Juno	June July June July June August Ditto June August Neptember August June June Ditto	7	31 2 18 547 26 178 26 19 9	Septembor Ditto Very slight Ditto June April and July Very slight August April to August May July and August July to September March Slight Ditto	11 354 411 327 325 404 500 444 277 507 381 350 446 709 664 1,052 516	1 4 8 1 1 8 2 2 61 6 11 7 6	10 350 448 326 326 444 449 275 446 378 339 489 763 1,051
		District Total	1,104,742	March	September		903	May to July	7,731	116	7,615
	601 602 603 604 605 606	Ranchi Town Ditto Rural Sili , Tamar , Lodhma or Kara Chora or Man- ,	18,443 122,152 68,535 95,696 67,988 56,220	August Ditto September August			13 50 18 31	August and October September August and September	1 812 853 282 855 240	7 8	805 853 282 354 237
	607 608 609	dar. Torps or Kuteo ,, Bulumat ,, Burwya or ,, Champura,	104,140 60,258 51,080	July Ditto	July		82 3	July to September	392 570 473	13	302 557 472
Lohardugga	610 611 612 613	Sassa. Lohardugga u Palkot ,	89,078 122,028 108,719 66,061	August	September		2,407 49 107	July to November May to October August and September August, October and November,	S22 627 199 173	100 7 15	28 2 527 192 158
	614 615 616 617	Daltonganj ,, Garwah ,, Ramkunda or ,,	88,234 64,202 75,899 64,300	March . May .	November	:::	1,396 1,428 464	March to October May to November March, April and June to October.	288 592 867 168	105 138 43	2 88 4 87 229 1 25
	619 620	Patun ,	36,591 79,655 14,667		Ditto	:::	294 540	May to October Ditto	252 454 84	28 · 62	224 392 54
	621	Majhwar.	102,515	1	October September		1,410 235	May to October March to May and July to September.	1	50 29	440 265
		District Total	. 1,609,21	March .	November		9,375	March and May to November.	7,797	652	7,145
Singbhum	62: 62: 62: 62: 62: 62:	Ditto Rura Chakardharpur ,, Ghatsilla ,, Khursowan ,,		June May! March June	May November October July Ditto August		3 7 13 16 9 108	May Very slight	1,144	1 4 2 0 9 17	808 378 1,138 186 551
		District Total .		1	November		156	- la		32	3,061
	63 63 63	O Ditto Rura 1 Raghunathpur 2 Jhalda		7 May 8 July 3	December May December April		1 1 22 	Very slight December March and April	844 451 298 435	3 15	843 448 298 420
М өл b hum	63 63 63 63 64 64 64 64 64	4 Para ,, 5 Baghmundi ,, 6 Japore ,, 7 Ichaghar ,, 8 Barahhum ,, 9 Gourandt ,, 1 Govindpur ,, 2 Niraua ,, 4 Topchanchi ,, 4 Topnodu ,,	05,01 89,74 83,38 24,25 64,25 64,25 135,84 45,79 89,17 59,67 50,62 48,01 18,41 39,85	0 February 8 May 9 February 7 Ditto 3 May 8 March 8 Ditto 7 April 8 May 7 Ditto	May September April July August April December April May May May May		200 9 111 222 5 5 87 87	March and May May Slight Ditto Ditto April April and May Slight	152 177 119 285 844 226 526 363 351	9 1 33 22 35 25 21	143 177 118 282 282 525 501 326 879 343 363
		TOTAL OF MALES	1,058,22	i	December	•••	203	Slight	6,140	51	6,089

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 10th March 1888.

R. LIDDERDALE, M.D.,

APPENDIX No. III.

SUMMARY OF SANITARY WORKS, IMPROVEMENTS, &c., CARRIED OUT IN TOWNS AND DISTRICTS, INCLUDING PRIVATE CHARITIES.

DURING THE YEAR 1887.

		IN THE TOWNS	ив.			:	IN THE INTERIOR OF THE DISTRICTS.			BY PRIVATE INDIVIDUALS.	
District	Name of		Nature of work	of work.		Namo St					
	town.	Completed.	Cost.	In progress,	Cost.	district.	Nature of work.	Cost.	Name of district.	Nature of work and by whom paid.	Cost.
	f Burdwan	. Two meat shops	Rs. 475	Extension of water-	Rs.	Burdwan	New roads and bridges	Rs. 6,076	Burdwan	Ercavation of six tanks	Rs.
Burdwan					·		Uttive road. The cost of this work is R. 74" but Rs. 3.4% only was just during the year. All see treds. All see treds and expenses in more ment Leans Act to nize land. Improvement Leans Act to nize land-holders for electrons and deeponing old and siledium pands.	3,040 9,040	_	alone costs RE. 4 (40), which was paid by Bahu Jihan Krishna Chatterjee, a Sub-Judge of the cost of the cost Re. 4 (40), which was paid by a Hindu widow, named Dulla Kulwami, in commercents of the Jubilee.	
	Bankura	ruces road-side drain One puces drain Two culverts	Rs. 60.	:		Barkus		5,960 Not stated. Bankura	•		
Bankura	Bishenpore Somanukhi	Reads and culverts Pucca drains One latrine	1,354								
Beerbhoom	Soory		Not stated.	A warket in commendation of the	335	335 Soury	Net. In Covernment Belates,	:	Sory	, v.v.	
	Mednapore	A well Laying down of 928 feet of Rangunge stoneware	Nct paid for in 1887. Resett paid			Mdnspore		1.33	Mdnapore	Twelve tanks excavated Nine tanks re-excavated Two pucca gbats provided to a tank	4,745
Midnapore	Tumlook	drain pipes and cost of a patent iron latrine. Fencing of a garden A shed Earthwork	year. The total cost is its 1,584.				In Estates under Government management, Seventy-seven krambheries (embank- merts) weie, constructed, Thorixov krambhere, were tuited		•		
	Ghatal Kreepoy Chuuderkona	Improvement of reads and construction of culverts Are reads A new reads Two new roads	179 579 21 Not paid for in 1857.	Three new roads	Ē		In thana Bhogwanpore. Atank was re-grainted at a cost of 18.3 +9.0 of winch Rs. 94.0 wins raised by subscription and the representation 18.3 120 was paid by the Khas Teal	7		•	
	Ramjibungore	Five new roads	160	****			The Nuthal drainness works referred to in fo mer reports were proceeded during the year at a cost of-	9,69	•		
	Chinsarah.		2 354	A drain	<u>.</u>	Hooghly	 XX	<u></u>	Hoogh'y	A puces hathing-ghat on the river-bank at Chandernagore was con-structed by one Raj Konnari Dassi.	Net stated,
figure 4	Serampore Uterparah Bensheriah	New roads New roads Bullock and cow shed Five pucca drains A bultress Metaling of a road Four pucca and six (em- Pour pucca and six (em- Pour pucca and six (em-	216. 216. 1.348 45. 45.	A pucca drain Wetalling of a street.	245						

	Ì	Cast.	B.				220	ફે		1,060		2,150 250
RY PRIVATE INDIVIDUALS,		Nature of work.			*.	ž,	A portion of the Bistupore road was metalled at the expense of Baba Arbore Ch. Sineha of Bistupore The South Dune-thun Winnepplity, Babu Kanai, Lai Sef made a free gift	of two cottalised fand, valued at Rs. 20 to the municipality for the construction of a rend to the construction of a rend whose parts of the construction of the construction of the newly-established charitable dispersary at Halishur. The cost of building will, it is estimated amount	to about Rs. 3 (90) In the Basimat Municipality Baboo Kail Nath Baneries has underriken to custracts a bridge over the Diol- chutta at an estimated cost of Rs. 2,160. The municipality will, however, con- tribute one-fourth of this amount. Another gentlemen of this place,	vaced at tank for the supply of drink- ing water to the public at a cost of		Seven tanks were excavated, the two largest of which vost Rs. 325 and Rs. 330 respectively, and were paid for by liban Ch. Han of Mobarukpore and Kazi. Necsettulla of Shibupore A musjid was built by Haji Saha, Sirden of Assaumin, at a cost of a third class muran. Under the cost of a third class muran.
		District.				Howfall						3,000 Khulna
	-' <u>-</u>	Cost.	R.			Not stated.	8,055 22.0.25 8,000	11,679 11,679 12,300			, , , , , , , , , , , , , , , , , , , 	9000
THE INTERIOR OF THE DISTRICT,		Nature of work,			The works of the Reisnore and	with drammer softening were and of the following which many the following which many the following which will dram out a live proposed with the following will dram are market will the following will effect great this probability.	A br'dee was built over Toole khal the close of the year of a read were not like the district of the year to following original works were in progress. Perpenny of the Kamarpookerkhal	Metalling of 8 miles of read Construction of two 18-inch pipe Saluters. Construction of two bridges				Repairs of village roads and bridges
In	District.				Horrah		2. Pergonnahs					Khuina
	=	Cost.	Rs.	86			11,751	. 696	1,300	200 3, n35		983
	w.rk.	In pr gress,		Construction of you by design of a road	:		Nine roads and tware-	Construction of four reads and the walls of a busing-gust.	Thirten roads, two laves, and ten cul-	A bridge Seven roads		Four purcar roads and a budge.
	Nature of	Cost.	. E	227.13	112		-		88 12 88	1,514 8,420 8,420 1,514	55 65 75 65 65 75 65	
IN THE TOWNS.		mplel.d.	Me'alung of reads Purchase of land for a read and nebters,	Houses for conservancy we betters One proca culvert Meralling of a lane Road-side drains	Five cuiverts Expenditure on roads	Unprovements to marrier sheels, the slampther hous and the maidan, and the maidan, and the construction of a portsule railway. Provenient of reads in provenients of reads in provenients of reads had an provenient of reads.	Metulline of five roads and eight lanes Improvements to drainser and roads and construction of culvents are and traction of culvents One tank	Metalling of earlt roads Metalling of four roads Twenty-nine culverts	Twenty-fire roads Three mivers A cart for remeins dead bodies of pampers	Buseerlat Netaling of four roads South Barrack Mun.cpal office build pore ing North Barrack Four roads, some culpore. Verifs and two lattines. Nychatty Tweive reads, two laines and one khall	films up of dictors on roadsides	Metalling of three roads. One culvert
	אמיימא.	town.	- Bydabatty	Bhuddresur	Ketrung	Bali	Suburbs of Calcutta,	Baranagrur South Subur- ban,	Rajpore Barripore	Buseerhat South Barrack- Pore. Pore. Dore. Verth Barrack- Tore. Nyehatty Cohundum	South Dum-	Kiulna Metalling of Satkhua Chundareah One culvert
		District.		Houthly concluden,	· ·	Howrah	-		24-Pergumans		-	Khuira

8,670 486 169 906		Not stated.	2,300 1,400	Not known.	0. 20.		009		6,895	750 1,440 1,500 86	7,320	2,200 200 200
Dassi at a cost of transmitted in Ranagast four persons exerated tank or wells for the public use in Melerprue fourteen village wells Two tanks were exervated at a cost of	In Kushtea a new building for the Municipal Hespital, with secomnodation for med or patients, was everted partly from municipal funds, pretly from the so-called Jubile fund.	and furth from a donation from the save family of Calcutta. Some visiace wells were also due by private individuals	Two tanks in the sudder sub-division Four tanks in Magura	Marura and an attendal was bull for the dispersion of the dispersion of the dispersion of the dispersion of the dispersion of the dispersion of the dispersion of the dispersion of the according to the will of the	hite Kumar Grish Ch. Sune of the Pickpara Raj famil; who bequeathed a sum of Rs. 1.55,404 for the construction and maintenance of a dispensary and hospital at Kand, the resulence of his accestors. The cost of this work as	Two tanks were also excavated in this district vt a cost of A pueca ghât was built at a cost of	The zemindars of Mahadebpore improved that vilage by opening out new roads and ur; improving the sue drains of the vilage roads at a cost of the most important work, however, carred out in the district, was the carred out in the district, was the	tew that age of the Pank on- structed at the cost of the Maharaja of Dinacep re, for carrying off the surplus drainings water of the town. The cost of this scheme when com- pleted is estimated at Ba. 25,100.	Thirteen ranks were evertated and one repaired at a total cost of-	Three wells	Twelve tanks	Three tanks were exestrated A school building was creeted
			Jessore	Moorshedabad	, T.L.		Dinagepore		Rajsbahye	Rungpore .	Burra	Pribna
			;	138			549 Not stated.			!	Not stated.	Not stated
m it more properly be called cattle tracts.			N:l	Three drai ingo cuts deepened at a total cost of			Six roads were improved Brita. Beliar Raiway extension from Dinggepore to Ramgunge was completed, and some new bridges Not stated were built.		N1		One road was under construction at the close of the year	Six roads with culterts and brides were constructed and the Telkupa khal at Ser, 15thuge was deepened.
			Jessore	Moorshedabad			Linagepore .		Rajshahye	Rungpore	Bugta	Putins
3,690	228 40		Not stated Jessire		ਜ਼ ਜ਼	5				·	3,550	
Duce drains	Meralling of a road . Construction of a knt- charroad	Netalling of a road	Two urinals and a cul-	Some r. als and ma	terrals for a bridge .	Construction of a godown		Drainage system throughout the town	-	Two reads	A dispensary bailding	
1 111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 # 191 191	20 % 115	11.72			192	25.25 25 25 25 25 25 25 25 25 25 25 25 25 2	1,35g		1,088 574 813 819	855	250 241 241 251 251 251 30
_ #	Une prices read Two culverts Conservancy stock	Three cuiverts (One from roller and Extension of a read Metalling of a road	One culvert F. ur latrines One purca drain Six read	Two pures drains Two wells A bridge Four drain culverts Two latrines	Some drains Five reads Some culverts Baloochur works Three drains		Two urinals Three bullock sheds One shaughtr-Louse of dispersary work shed is shed One cart shed one cart shed recurrent circle Wetalling of a road		Extension of Mehame- dan burml-ground	Metalling of three 1 adds A puck a drain A public latrine Fitting up of a privy	Four kntche roads Four calverts Two pucca culverts	Two night-soil carry Filling up pits and clearing junge A drain Two embattments and two empotary bridges Acquisition of ind Metalling of a road A spar road A path road
Santipore	: . e.c.	Nuddes Meherpere Comerco.iv	Jessere Kotechandpore	Be-nampore	orshed-	Jungipore	Diugepore	Rampore Beauleah		Rungpore	Bogra Sherepore	Pubna
Nuddes			Jessore	·	Moorshedalad		Dinagepore	Bajsbahye		Rungpore .	Boggra	Pubna

×	Indesses of secular	-		IN THE INTERIOR OF THE PISTRICT.		M	By private individuals.	
Z.	Nature of work.		District	Variate of work	į	Name of		į
ت -	Cost. In progress.	Cost.		4404		district.	Auture of Worn.	1036
Onstruction of cerez roads are are and metalling of two. 1 culvert more are are are are are are are are are a	887 Three cuiverts 447 Extension of a read 50 Construction of three 113 122	8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.			RS.			, ži
Thirteen stone drains Laying down of pires Two throby's tank's Construction of three new and improvement of one bathing place Removal of tannery Fround	1,683 'f.wo slaughter-houses 1,217		Not stated Darjeeling	Two hat dutch boundaries were de- marcated. A new road Eeven hats in the Terai were improved and one well sunk.	25.57 850	Parjeelng	ïs .	
	187 187 183 185 185 80 80 80					·	•	
	218	:	Julpigoree	This municipality, it is said, is not old enough to undertake sanitary work of any magnitude.		Julpigoree	NR.	
One culvert One embankment A corrugated iron shed A corrugated iron shed A corrugated iron shed Opening of two mehters passages One hew road Improvement of old roads Too mehters sheds Removed of workshop A rant wall Removed of workshop A cattle bathing ghat A mat wall Removed of workshop A rant wall Recruiting of 14 mehters and mehtraning of 14 mehters shop Eight new lamp-posts Land acquisition Recruiting of 14 mehters shop Shop Shop Shop Church gate Chu	1.290 A pucca drain	8	Darca	One road was made and it was provided with a kall along its length for the purpose of navigation as well as which it runs	Not stated.	Dacra	37.4.	

4,030	240 177 125					750 900	100	Not stated.		10,600	940 91 0	6,623 714 4,540 250	
	11:					. :	:		n and	i of con	hari- d by	parts	
	:::					; -	:	: :	rh tow The fe	he latte at a co	n the C	structe erent j st of	
	: 1:		~;			::	:	ew tanl	sein Ba	Kamao and t u Ram neted ii	ward i	otal co	
	- 1 :		Nd.					nd a f	lias: or Patna	d by Is. 600, nd fad constr	lisease ary. ks we	duals widuals t at a t	
	One Khal One road A tank			appalation comment of		Two tanks	One pueca ghât	One culvert and a few tanks	Twodharanse the other in	was provided by Kamodovi Constanting at a co-t of Rs. 60), and the latter by Mori Ram and Jacka Ram at a cost of Rs. 10,000	A pacea well in the Charter that the Charter that the Dispensary. The above works were constructed by the Aurangabad Judiee Committee.	I wenty-nine wells were constructed by private individuals in different parts of the district at a total cost of One tank	
	Backergunge		Wynensing .			Chittazong	Tippersh	Noakhally	: • 4		67a	Shahabad	
	1,373	s 60					1,499 4,140	GC1,	. 1221.12		24,413 20,475 8,560	89 79 65 75	
	. :						::				e sur-	at a::	
	: ! :		Nd.			Nil.	::	 S.d.	Nº7.		A bridge was lengthened and the sur- face of it metalled. Some conds with culverts were con- structed. Maintenance of trees on readsides.	Roats were widened in the Covern- rent estates of Narangunge at a cost of care. A bathing ghat for women	
	Six roads A khal	monghor Libert File of No.			•	70 50 000	Two tanks Nine roads	SIX KDBIES			A bridge we face of it in Some roads structed	Roads were rient estat cost of A bathing gl	
	Backergunge		กุลิยเราะบะ (K			Chittagons	Tippersh	Noakholly .	Patna			Shahabad	
	:	19 321	2,078	908	s.		-	, ,		Not staled	4 :	: : : : : : : : : : : : : : : : : : :	
		:	र्ह : -3	•	72								
	1	One pueca road	A new charitable pensary building	:	Metallinz of a road					: :		A 1784	r-houses
		One puod A bridge	new c	, tank	Ietallin					One culvert		- pau	aughte
26 86 176 190	1,536 192 324		<u>.</u>	15.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	25 8 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	52 3	188	6			8 828 838 838 848 85 85 85 85 85 85 85 85 85 85 85 85 85	2,440 1115 25 25 330 330	7) C1317171
: : : 1	ema:	<u> </u>	i i i i i i i i i i i i i i i i i i i	Bring Hos-	ing	truction r	: ::	··	tank cess- ation	trines	3:::::	1:::.1	1111
date	ns n the cr	drains read	 or meht road	Civil	two ro	twent; constr rerts se st	: ::	ion of p	on of a of two vaccin	a dren atent la s posts r platfo	n hospit n latrii rines		road ing cur
One road Wooden and bridges Six drains Four latrines	Surface drains One culvert A building on tion ground	A movable latrine tor feirales	A road	Cutting and cleating jungle Quarters for Civil Hospital Assistant A road Ten road Ten anali bridges	A road A road A dispensary building A lattine Metalling of two roads Two kutchar of a paccas latting	Cutting of twen drains and cons of four culverts Two vaccine	houses Sir roads Seven drains	One culvert Reconstruction of pucca	drains Re-ragavition of a tank Filling up of two cess- pools A house for vaccination nurposes Widening two lanes	Extension of a drain Hombury'spatent latrine A drain A par entrerts One latrine Two includar flatforms Metalling a road	New Pulerin hospital. Bemoral of a lattine. Twe from latrines One cuivert Two latrines	Four latrines Three urinals One drain One bazar One new read	One kutcha road A well A culvert
Madaripore	Burisal	Jrallacatti . Nalchitti	Perozepore	Sherepore Kishoregunge	:: <u>a</u>	Netrokona Chutagong	Brahmunberia	Norkhally		Behar	Gys Daudnugger	Arrah Buxar Document	: : :
							, :	!				:	
Furredpore		Backergunge			Mymersingh	Chittsgong	Fipperah	Nosklully		Patna	.:. .:.	Shahabad	

		Cost.	R3.		11,700 8,135 100	200	5,000	Not stated.		Not stated.	500 1,800	
	BY PRIVATE INDIVIDUALS.	Nature of work.	NH.		21 tanks 29 wells Theoryte	a witterway about two miles long at a cost of the town was undertaken with a tew to ascertain whether an efficient derings exheme cannot be prepared. The cost of the surve was	smounts to	A few wells and tanks		Wells and tanks	A bridge	N17,
		District.	Morufferpore		Durbhungs	•		Sarun		Chumparan	Bhskulpore	Mongbyr
		Cost.	B.		Not stated			2,330			Not stated	1.930
IN THE INTERIOR OF THE DISTRICT	•	Nature of work.	30.		Metalling of roads			Advances under Act XIX of 1889 for the construction of 25 wells	•		A road and a bridge were constructed	Seren wells
	_	District,	Mozufferpore		Durbhanga			Sarun		Chu mper un	Bhagulpore	Nonghyr
		Cost.	Rs.	£ 12			Transaction of the second	Not stated	25.5. 1,57.2.2	139	:	
	work.	In preress.		Met.lling three roads	One culvert			Ten new depóts} One bungalow Three roads	Side drains Four roads	Drains		:
m'	Nature of work.	Cost.	8.8. 8.934 19.6 51	~:		1,294 66 105 81 712 712		977 9,060 47 1,1	678 197 197 197 198 198 197 198 198 198 198 198 198 198 198 198 198	22 109 36 36 199	825.3 827.3	1.994 1.192 654 167 150 150
IN THE TOWNS.		Completed.	Metalling of 10 roads Two culterts A new roam in hospital A thatched roof in F. W.	Desperies a veil Meisling two roads A bridge A latrue Two bridges Two bridges One puces vat	One proces latrine One autoha do, Improvements to ten Rutcha latrines Rutcha latrines Metalling two roads	For culveris Four sweeping carts Four latrines Manufacturing bricks Seven culveris	One bullock	Two staughter-houses with fencing	A market depôt and dry-earth shed	Metalling road A well A prive A prive Its spill drains to wells	Further development of scheme for supply of filtered water to the town	Metalling two roads Localtuction of a market Eight carts Come Sancer drain A reuseway Two latrines
	;	Name of town,	Mozuferpore	Hajipora Lalgunge	Darbhanga	Мадривъпі		Chupra	Sewan Revilgunge	Molibari Bettiah	Blagulpore	Nonghyr
		District.		Mozufferpore	Latbhanga			Sarun	•	Chumparun {	Bhagulpore	•

_	į		3,690 1,915 347 328 328	13 13 13 13 13 13 13 13 13 13 13 13 13		9,160	825 257	1,595		2,700
			1 11:	1 11			::	:		<u>-</u>
			1 1111	11		:	1:	:		;
ı		Ę		: !!		:	: :	:		i
	Nu.	in the	agat w	nkmer ::		:	: :	:	Nu.	•
	4	Š	ungles canal	n emba		:	::	:		:
		Pour tente and sink tente	Six wells Clearing jungles Cutting a canal Re-excavation of drains	Raising an embankment One well Two tanks		Four tanks	Two tanks Five wells	Hazaribagh Four wells		Manbhoom Two tanks
	Per.		: :	ŧ			1	Eh	5 iii	:
	Souths! gunnahs.	Pirmesh	·	Cuttack		Balasore	Pooree	Hazaribe	Lobardugga	Manbhoo
	Southal Per. New roads were made in many places Not stated gunnahs.		2,415 145 500	2,000 Not stated		609	1,460 154 1,707 1,004	}	150	896 2,000
	saored		:::	ucted		:			: 1	::
	many			Six tanks		:			::	::
	ade in		_ : :	s were		:	ilding	ı.	: : :च	::
	ere m	Nü.	roads	e roads			New roads	Nu.	 9ge 106	
	w spec		Metalling of roads Bridges Kutcha drains	nks village		Two new roads	oads rells ispens	į	ell ew vill	nera w
	New 1		Metalling Bridges Kutcha			Two n	New roads New wells Bunds New dispens One inspecti		One well One new village road	Two puera wells One bund
	Per-	:		:		:	:	ų8j	: :	:
	Southal Funnahs.	Purnesh	Maldah	Cuttack	nave the endangers of	Balasore	Pooree	Hazaribagh	Lobardugga	Manbhoom
	į	8,186	1	3,500	1,045	ŀ	1,500	675		_
	·	i		and roads	i			E		
		3	!	ng three n trines	of road	•	chan	:		
	i	A bridge	:	Constructing and widening three roads Two tin latrines	Metalling of road	i	A drainage channel A latrine	One nullah		
_		76 A bi								
602	1,550 1,550 130 130	75	246	709 1192 243 855 468	281	418 800	20 20 20 20 20 20 20 20 20 20 20 20 20 2	168		156
: :	roads	kutcha	1 1	11111	arket	::	ros.d wells	:		:
atrine	three rork		: =	rains rrts nes rays oad	20 · · · · · · · · · · · · · · · · · · ·	:::	t of a strong side	÷	zž	rks
ablic l	A pucca drain Remaking of three roads Protection work to a bridge One pucca well	18 new	a	aces di calve n latrii watery iog a r	looring rn	:: 	One pucca road Improvement of a road A kutcha road Improvement of 13 wells One kutcha dram	ell	Nu.	ege wo
Two public latrines	A pucca drain Remaking of three roads Protection work to a bridge One pucca well	Opening roads	A drais A masc	Two puces drains Sixteen culverts Two tin latrance Three waterways Widening a road Slaughter-bouse roof	Stone flooring of market godown Awell	Latrines Drains	One pr Impro Impro One k	Опе		Drainage works
E		:	azar sh	:		I	•	.: ф	i	:
i Jamui	Shahebgunge	Purneah	English Bazar A drain	Cuttack	Kendrapara	Balasore	Pooree	Hazaribagh One well	Ranchi	Purulia
::	Per.	:	سېت	:		:	•:	:	E	1
	ģ	. 4	ન	성		ero	: &	Hazaribagh	Lobardugg	Manbhoom
	Sonthal gunn	Purnesh	Maldah	Cuttaok		Balasore	Pooree	Hazs	Loh	Man

OPPICE OF THE SANY. COMME. FOR BENGAL,

The 15th March 1888.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

APPENDIX No. IV.

STATEMENT SHOWING THE PERCENTAGES OF INCOME EXPENDED IN EACH MUNICIPALITY IN BENGAL FOR ORIGINAL SANITARY WORKS, FOR SANITARY WORKS OF AN ANNUALLY RECURRING NATURE, AND FOR ALL MUNICIPAL EXPENDITURE PROPER.

DURING THE YEAR 1887.

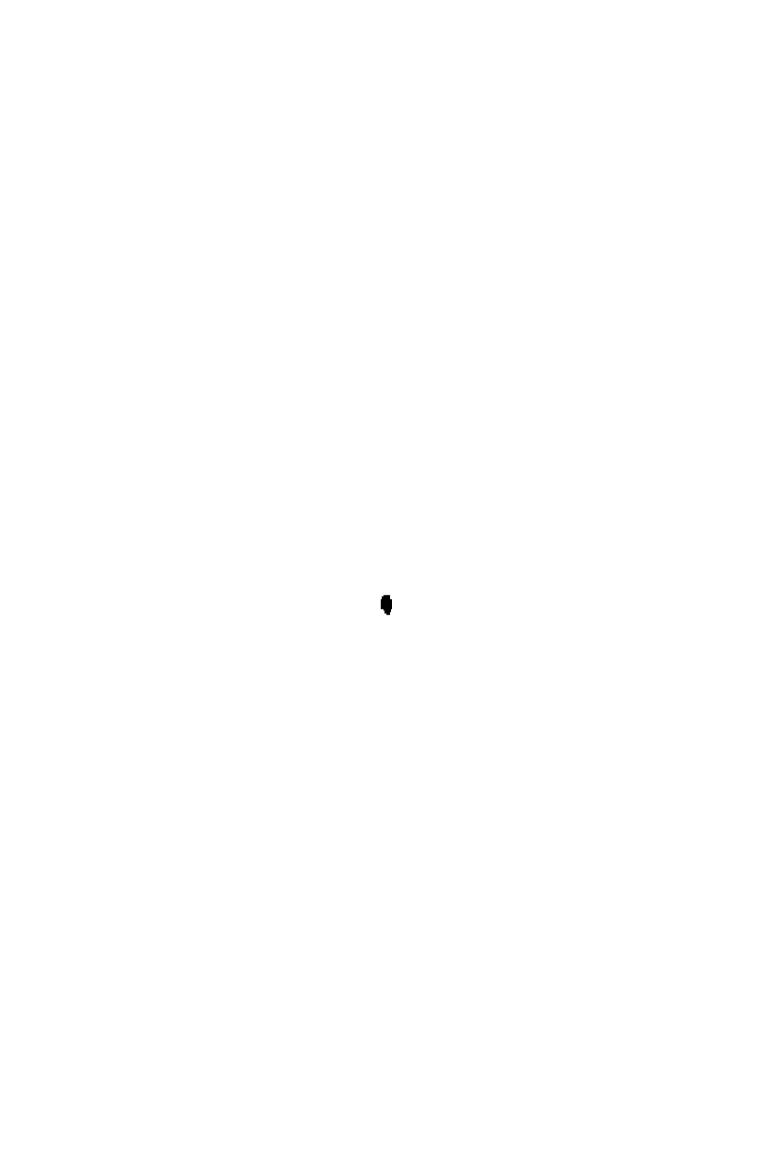
Statement showing the percentages of Income expended in each Municipality in Bengal for Original Sanitary Works, for Sanitary Works of an annually recurring nature, and for all Municipal Expenditure proper during the year 1887.

Dist	RICTS.	-	MUNICIPA	LITIBE) 5	Percentages on Sanitary Works of an annually recurring name	Percentages on all Mani- cipal Expenditure Pro- per.	DISTRICTS.	•	MUNICIPALITIES.	Percentages on Original Santary Works.	Percentages on Sanitary Works of an annually recurring nature.	Percentages on all Muni- ripal Expenditure Pro-
24-Pergunnah Mozufferpore Bhagulpore Nuddea Dacea Sarun 24-Pergunnah Bankurn			North Barrac Lalganj Bhagulpore Santipore Narainganj Sewan Rajpore Bishenpore		47 31 28 28 27	41 6 49 53 82 13	85.67 15.30 48.17 16.85 28.86 19.62	Hazarihagh 24-Pergunnahs Hughi 24-Pergunnahs Tippemh 24-Pergunnaha	<u>.</u> ,	Hazaribagh South Dum-Dum Bansberiah Bussirhat Brununberiah	7·11 6·74 6·65 6·42 6·20 6·16 5·87	\$2*80 12:24 17:47 \$2:47 28:30 45:98 52:84	27:45 27:84 15:36 57:07 52:70 36:08
Shahabad 24-Pergunnah Mozufferpore Miduaporo Pubna Nuddea Southal Porgu	i		Sasseram Baraset Bajpere Ghatal Pubna Meherpore Sahebgani	•	24 24 24 20 18 18	76 39'11 01 45'52 28 40'15 70 30'48 92 41'31 89 38'51	20.03 23.72 27.99 30.23 44.34 87.17 36.95 21.73	Backerganj Burdwan Ditto Dacea Bankura Mymensing	· · · · · · · · · · · · · · · · · · ·	Suburbs of Calcutta Perozepore Culna Dainhat Dacca Baukura Netrokona	5 84 5 59 5 52 5 38 5 37 5 13 5 02	43'50 49'84 20'97 35'18 71'29 58'46 25'43	34*83 35*79 42*43 42*90 40*09 19*51 28*51 8*90
Monghyr Hughli Nuddea Sarun Hughli Pubna Purneah Mymensing		:::	Jamui Bhuddressur Kushtes Revilganj Seramporo Serajganj Pornoah Kishorogani	•••	18' 17' 17' 17' 16' 16'	78 19·14 23 42·09 26 29·05 31 80·11 5 31·01 40·23 3 48·18	36·21 36·83 47·84 27·12 29·95 26·98	l'aridpore Patua Backerganj Madnapore Ditto Darjiling Dunanur		Deomraou Madaripore Patna City Jhalokati Ramjibunpur Tumlook Darjiling Dmajper	5°02 4°98 4°96 4°91 4°87 4°82 4°40 4°43	40°86 85°22 02°64 13°35 31°07 47°08 44°90 61°49	41.63 52.29 80.29 66.06 49.07 46.74 28.49 21.39
Noakhali 24-Pergunnahs Patna Cuttaek Ditto Hughli Balasore		:::::::::::::::::::::::::::::::::::::::	Noakhali Nyehatti Behar Cuttack Kendraparah Uttorpara Balasore		15°4 14°8 14°8 14°7 14°7 14°7 14°7	8 28.65 9 22.62 7 44.75 6 84.52 8 87.18 5 81.72 2 56.69	54-66 15-76 24-33 22-32 43-55 37-30 32-85 25-05	Mymensing 24-Pergunnahs Birbhum Chumparun Darjiling Hughli Murshidabad Bogra		Shorpore South Suburban Suri Bettiah Kurseong Kotrung City Murshidabad	4.24 4.23 8.92 8.92 8.71 8.64 8.63	24.06 66.28 53.43 50.21 20.19 88.53 43.41	27.39 62.73 25.92 19.73 22.06 17.00 35.64 12.91
Durbhanga Khulna Mymensing Puri 24-Pergunnaha Mozufferpore Monghyr			Puri Baranaggur Mozufferpore Monghyr		13.4 12.8 12.4 12.3 11.9	59:47 37:65 7 14:38 4 56:24 50:22 49:48	17'01 48'80 - 14'67 27'72 30'70 87'65	Gya Midnapore Shahabad 24-Pergunnahs Bogga 24-Pergunnahs Nuddea		Tikari Midnapore Jugdispur South Barrackpore Skrepur Barripur Coomarkholli	3.30 3.07 2.93 2.80 2.60 2.60 2.31 2.18	35.11 23.01 65.32 33.89 58.88 45.32 48.59 85.64	55 41 28'50 27'39 31'90 36'52 46'26 83'66
Jya Juddes Juddes Jurbhangs Jowrah Juddes Juddes			Daudnüggur Nudden Baidyabatti Durbhanga iowrali Janaghat Muktagacha		11.6 10.7 10.7 10.7 10.7	44°57 80°36 40°94 43°56 51°78 55°07	25.79 41.99 43.40 22.75 "7.81 25.94	Hughli Maldan Khluna Murshidabad Midnapore Julpaiguri Juhaiguri Shahabad Mymensing		Hughli and Chinsurah Euglish Bazar Chundura Berhampore Chunderkons Julpaguri Bhaboosh	1.89 1.68 1.60 1.59 1.43 1.35	54*23 48*08 18*12 66*46 35*03 45*54 33*03	28·15 40·78 89·54 48·99 16·92 48·46 14·22 64·40
lowrah hahabad arun urdwan sekerganj uddea aridpore ajahahyo		A. C. F. H. H. H. H.	Sali Arnh Chupra Canikanj Surrisal Seemugore aridpore		10'4 10'13 9'91 9'81 9'86 9'42	24·18 59·68 52·73 35·85 63·08 16·11 70·31	62°21 , 28°55	Shababad Jhumparun Burdwan Backerganj Murshidabad Midnapore	::: ::: :::	Jainslpore Buxar Motihari Burdwan Nulchitti Jumgipur Khipai	1 06 1 01 -78 -77 -76 -75	22:83 66:56 51:03 46:94 23:58 59:88 53:16	85:48 81:41 47:40 41:48 28:16 29:80 82:01
ungpore urshidabad onghyr ssore aldah		K	and analpore otchandpore	eab ,	8.94 8.82 8.71	59'94 51'29 '37'43 87'67 -61'95 29'78 44'61	22.00 15.72 G	Casore Chittagong	:- -	Kishnaghur Jessore Chittagong Sonamukhi	-13	81 '92 55'41 66'52 15'6	15:47 22:31 83:10 68:74

Office of the Sany. Commr. for Bengal, The 5th April 1888.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.



APPENDIX No. V.

ABSTRACTS OF INSPECTION REPORTS ON TOWNS VISITED IN 1887.

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Balasore Town.—Inspected in January 1887.—This town was found in a better state than before. In fact it was evident that Balasore had somewhat improved in sanitary condition, the chief improvement being an extension of the system of saucer-drains in two of the crowded parts of the town in one of which, consisting chiefly of pucca houses, the house-drainage has been got rid of and thus a very great nuisance removed. The conservancy arrangements also appeared to have received much attention of late. There were, however, yet many defects, particularly under the head of water-supply, which required to be remedied early.

The suggestions were:—(1) To devote year after year a larger proportion than only 7.56 per cent. of the income to rectify the sanitary defects that yet exist (2) To see that the sanitary clauses of the Municipal Act III (B.C.) of 1884 as far as they are in force, are administered with the desired activity and minuteness. (3) To have the kutcha roads gradually metalled, a certain length of them being done every year. (4) To give effect to my suggestion offered in the last report regarding the planting of trees on the sides of the principal streets. (5) To put up a cistern at the well in front of the thana, to be filled from the well, and to cause a small stream of water to be discharged from this daily through a small pipe so that a flow of pure water will continue running for sometime, and will assist in keeping the and to cause a small stream of water to be discharged from this daily through a small pipe so that a flow of pure water will continue running for sometime, and will assist in keeping the drains sweet; also to consider the desirability of erecting a native basket lifter of water on some of the tanks and raising water by it and discharging into some of the larger pucca drains to keep them in a good state. (6) To carefully exclude rubbish from the pucca drains, and to warn house-holders and especially the conservancy staff, against casting it into these drains, as they are so fond of doing. (7) To have the town efficiently surface drained so that rain-water instead of collecting in pits and depressions may immediately escape into the drains. (8) To fully utilize section 227 of the Municipal Act, which requires owners of improved drained and within 100 feet, of municipal drain or outlet to drain such land improperly drained land within 100 feet of municipal drain or outlet, to drain such land. (9) To diminish the number of trees overhanging tanks, or have the overhanging branches lopped off. (10) To have a sufficient number of tanks cleaned out, properly protected from pollution, and reserved solely for drinking. Also to consider the advisability of giving small sums to owners of foul tanks requiring help to enable them to treat the tanks in the manner indicated above. (11) To sink one or two of Norton's tubular wells as an experiment to see the quality of the water obtained. (12) To carry out those of the suggestions offered under the head of conservancy in the last Inspection Report as have not yet been attended to (13) To include drains among surface cleansing and keep them permanently. (13) To include drains among surface cleansing and keep them permanently attended to. clean. (14) Not to allow cow and cattle ordure to be accumulated within house premises, but to have it either converted into cakes for fuel or removed at frequent intervals to the fields as manure or deposited on the roadside for removal by the conservancy carts. constructing public latrines in future to set apart separate buildings, and not different parts of the same building, for the accommodation of the two sexes, those for females being attended to by methranies only. (16) To fully use Part IX of the Municipal Act, which appears to be in force here, and import methers to work it properly. (17) To strictly enforce the provisions of the law in all cases in which private privies are situated too close to public drains, tanks &c (18) To take steps generally to improve the condition of the private markets. (19) To construct a properly appointed municipal market. (20) To have the tank close to the slaughter-house dug out. (21) To have the jungle in the Kuddam-Bussul burial-ground cleared and kept down. (22) To avoid burials at raudom, at least in the public cemeteries, the graves being required to be dug here in regular lines with fixed spaces between each grave and each row of graves. (23) To get whoever returns to the town with the vesicles of inoculation on his arm or in a state to afford contagion punished according to the provisions of the law on the subject. (24) To require the Registrar appointed for registering births and deaths to go round some of the wards daily and try to detect evaders of the law. Also to ask the tax-collectors and the overseer to assist in this respect, the required information being easily obtainable by them while going their rounds in the performance of their ordinary duties.

Action taken on the suggestions:—(1) Greater attention is being paid to the sanitation of the town. (2) Trees have been planted on the sides of the principal streets. (3) The drains are being kept clean as far as practicable and the pucca ones among them are being flushed by raising water from tanks by means of tenda. (4) The owner of the land in front of the Kuddam-Russul burial-ground has been called upon, under section 227 of the Municipal Act, to drain it, and also to repair or to pull down the archway in front of the Kuddam-Russul, which threatens to fall down. (5) Cowdug in private premises is being disposed of by the owners turning it into cakes for fuel, a small quantity being, however, kept for manuring purposes. (6) Care has been taken to prevent the erection of private latrines near house, wells, tanks and public drains. (7) Two public latrines have been constructed, one for each sex, and methranies have been engaged to attend to latrines for females. (8) The chief market, called the Mandal's Bazar, is being properly drained and cleaned and provided with proper sheds with pucca floors by the owner. (9) The graves in the cemeteries are being dug in regular lines with fixed spaces between each grave and each row of graves. (10) Steps have been taken to guard against the entrance of pilgrims and other persons to the town in a state to afford contagion. (11) The Registers of births and deaths are being correctly kept.

Cuttack Town.—Inspected in January 1887.—I went round the town generally, and on the second day of my inspection had an interview with the Vice-Chairman. It afforded me much pleasure to see many improvements effected since last visit, and it appeared that the Commissioners were bestowing considerable attention in ameliorating the condition of the place. There were, however, yet many grave sanitary defects that called for urgent rectification. The water-supply was both deficient in quantity and bad in quality, the chief sources from which water is drawn being open to all sorts of pollution. The arrangements under the head of conservancy were, on the whole, very defective and in some instances highly objectionable, and those relating to the disposal of the dead were far from being satisfactory. The town, moreover, abounded with filthy pits and hollows containing water of the foulest character and full of decaying vegetation, which constituted a standing menace to public health and as such required to be got, rid of as early as practicable.

The suggestions were:—(1) To allot annually a much larger proportion than only

The suggestions were:—(1) To allot annually a much larger proportion than only 46.8 per cent. of the income to rectify the existing defects and place such parts of the town as Juggernathbullay, Dalooram Misser's Lane, &c., that are very unhealthy, on a proper sanitary footing. (2) To see that the sanitary clauses of the Municipal Act III (B.C.) of 1884 as far as they are in operation, are administered with the activity and closeness that could be desired. (3) To keep the sidedrains sufficiently open for the ready escape of rainfall. (4) To consider the desirability of metalling a certain length of the kutcha roads over the consider the desirability of metalling a certain length of the kutcha as well as a reconstruction. every year. (5) To take great care to prevent encroachments on kutcha as well as pucca roads, the offenders being always dealt with according to the provisions of the law. (6) To put a stop to brick making within the limits of the municipality. (7) To strictly enforce section 232 of the Municipal Act and prevent the making of excavations for the purpose section 202 of the Municipal Act and prevent the making of excavations for the purpose of taking earth, &c. therefrom, or of storing rubbish or other offensive matter therein. (8) To connect, as far as practicable, the filthy pits and excavations with one another and with the main drainage channel, and have the flood water of the Katjuri introduced into as many of them as possible. (9) To fully employ street sweepings and the solid refuse from the houses in filling up those of the pits that are at a distance from houses, taking up only a small number of the rite so that they may be dealt with quickly. small number of the pits so that they may be dealt with quickly. Also, after they are filled up, to spread a thick layer of earth over the surface and encourage the growth of vegetation up, to spread a thick layer of earth over the surface and encourage the growth of vegetation thereon. (10) To consider the advisability of acquiring a few of the excavations that are conveniently situated and converting them into proper drinking water tanks, the spare earth being utilized in filling in surrounding holes and depressions. Also to induce the rich owners of some of these to treat them similarly. (11) To consider the desirability of annually setting apart a small portion of the income for filling in some of the hollows with mud and sand from the river beds. (12) To gradually convert the kutcha sidedrains into pucca shallow saucer-shaped ones, specially in the more crowded parts of the town. (13) Wherever pucca drains are provided to make arrangements for connecting all house drains with them. (14) To keep the pucca drains properly clean and provent the throwing of rubbish into them. (15) Not to permit the drains, both pucca and kutcha, to be encreached upon. (16) To reserve some of the better tanks solely for drinking and domestic purposes, and to thoroughly protect them from pollution. Also to introduce if possible the flood water of the Katjuri into them and obtain a thorough change of water. (17) Not to allow the banks of the Government tank called the Gunga to introduce if possible the flood water of the Katjuri into them and obtain a thorough change of water. (17) Not to allow the banks of the Government tank called the Gunga Mandir to become covered with vegetation. Also to see that the banks of all tanks from which drinking water is taken are free from trees, &c. (18) To induce those who can afford the cost to re-excavate a few private tanks, protect them from inward drainage, &c. and reserve for drinking. Also to consider the advisability of giving small sums to those requiring help to enable them to treat some of the tanks similarly. (19) To have such tanks as are useless or cannot be kept in proper order filled up. (20) To sink one or two properly protected pucca wells every year at convenient places, and set them apart for drinking only, until a sufficient number of them is provided. (21) To make an experiment with one of Norton's tubular wells to see how it answers at Cuttack. (22) To have the conservance establishment strictly supervised and full work got out of it. (23). To require the vancy establishment strictly supervised and full work got out of it. (23). To require the people to bring out at the appointed hour all house rubbish and deposit it on the roadside for removal by the conservancy carts, the existing accumulations around and at the backs of houses being removed at the cost of the owners. (24) The provide wheel-barrows for the proper conservancy of the narrow lanes. (25) To provide a few barrel-carts for the removal of fluid house refuse from the more crowded quarters of the town to the trenching ground for disposal, until such time as it can be discharged into pucca shallow public drains. (26) Not to allow cow and cattle ordure to be collected within house premises, but to have it either Not to allow cow and cattle ordure to be collected within house premises, but to have it either made into cakes for fuel, or removed to the fields as manure at short intervals, or put on the roadside for removal along with street sweepings, &c. (27) To have the large number of pig-stys that are said to be very dirty removed beyond the limits of the municipality. (28) To provide more public latrines at convenient places, and to have them either pucca or of corrugated iron. Also to gradually replace the existing kutcha structures by pucca ones, or to provide them with pucca floors and drains and partition walls of tin or corrugated iron, or generally adopt in their stead Hornbury's pattern corrugated iron latrines obtainable from Messrs. Burn and Company of Calcutta. (29) To tar the gumlahs, the drains and the walls of the public latrines up to three feet from the floor, at least once every month, and not once a year as is done at present. (30) To keep the tins of the latrine well tarred to protect them from corrosion. (31) To induce those who can bear the cost of construction to provide for themselves proper surface privies which can be easily cleaned. (32) To strictly prohibit themselves proper surface privies which can be easily cleaned. (32) To strictly prohibit

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the improper disposal of night-soil by private methers, and invariably bring up the offenders for punishment. (83) To carry on the trenching system properly, the trenches being dug in lines one foot deep and one foot wide and a foot apart and only half filled with night-soil, the remainder being covered with earth. Also, when a part of the ground is manured as above to have it cultivated with such plants as jute, indigo, sugar-cane, Indian corn. &c., and with English vegetables. (34) To spare no pains to break the combination among the methers, at least do away with the offensive features of it, and gradually enforce the provisions of Part IX of the Municipal Act. (35) To provide pucca shallow drains all round the municipal market, Ranigunge half drain pipes being the best material to use for the purpose. (36) To see that the compounders or dispensers of European medicinal drugs possess certificates of competency. (37) To provide in the principal slaughter-house cross-bars and pulleys for slinging heavy carcases. (38) To at once prohibit further interments in the Kuddam-Russul burial-ground, and request the Mahomedan community to plant it with rapidly growing trees and horbage, and to establish, if required, a public cemetery in its stead at the outskirt of the town. (39) To permanently keep down the over-growth of jungle in the burial-ground near the slaughter-house. (40) To always insist upon deep burials, the chupper being placed at least 4 feet below the surface of the ground. (41) Not to allow the clothes, pillows, &c., of the deceased to be appropriated by the Dhobis, bus always destroyed by fire. (42) To fully utilize the provisions, "particularly the penal ones, of the compulsory Vaccination Act, and have not only all the children born during the year, but also a good number of those who are still unprotected, vaccinated. (43) To specially appoint a man to go round the various wards alternately and detect and report for punishment all persons who fail to comply with the requisitions of the compulsory Re the improper disposal of night-soil by private methers, and invariably bring up the offenders for ment all persons who fail to comply with the requisitions of the compulsory Registration Act. To require the municipal servants such as tax-collectors and overseers, who have much out-door work to do, to report all births and deaths as a check on voluntary registration. (45) To require the tickets that are given for deaths reported to be made over before interment or cremation to the constable within whose beat the burial or the burning-ground where the body is taken for disposal is situated. (46) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—(1) The suggestion for diverting wholly or partly the money now spent in lighting is under consideration. (2) The conservancy establishment will be strengthened. (3) The number of public latrines has been increased, and some of the kutcha structures have been replaced by pucca ones. (4) The gumlahs and the walls of the latrines and the tin screens are being tarred once a month. (5) Night-soil is being trenched in the manner suggested. (6) Cross-bars and pulleys for slinging heavy carcases will be supplied in the slaughter-house at Dobandha. (7) A Sub-committee has been formed to carry out the suggestions about the disposal of the dead.

Puri Town.-Inspected in January 1887.-I was glad to see improvement since last visit, and evidence of the progress the town was making towards better sanitation; but the health conditions of the place were still very far from being satisfactory. The drainage was as bad as before, the whole place daily soaking in an enormous discharge of fluid of the worst kind and during the rains becoming completely water-logged. The arrangements under the head of water-supply were very unsatisfactory, and required to be wholly revolutionized, while those relating to conservancy and disposal of the dead were not what they should have been, being very defective in several instances. The lodging-houses, too, were in a deplorable state, most of them consisting of small, low, ill-ventilated rooms which were little better than dark dungeons. In fact, much had yet to be done to put the town on a

proper sanitary footing.

The suggestions were:—(1) To avoid in future the mixing up or omission of important items of income. (2) To sell off the lands belonging to the municipality and at present yielding an income of nearly Rs. 3,000 a year, and employ the considerably large sum of monoy which might be thus realised in removing some of the most pressing wants of the town and carrying out sanitary works of a permanent nature. (3) To seriously consider the desirability of slightly raising the taxes. (4) To annually devote as much money as possible for gradually carrying out the suggestions offered under the several branches of possible for gradually carrying out the suggestions of the under the several branches of sanitation. (5) To show much greater activity in the administration of the sanitary clauses of the Municipal Act. (6) In repairing roads not to use laterite over a layer of street rubbish which cannot form a good foundation to a road. (7) Not to permit the roads to be even temporarily encroached upon by pandahs and shop-keepers during the festivals where the former are narrow, or where the structures put up are likely to occasion inconvenience to the passers-by. (8) To use earth and sand from the sea shore in filling up foul cess-pits and hollows when they are near the dwelling-houses, street-sweepings, &c., being amployed in other cases. Also to take up only a few of the pits at a time so that they being employed in other cases. Also to take up only a few of the pits at a time so that they may be dealt with quickly. (9) To fully utilize section 232 of the Municipal Act and prevent or properly control the making of excavations in future. (10) Pending the provision of propor road-side drains, to have coss-pits under the verandahs regularly emptied and kept as clean as possible. (11) To divert towards providing a proper water-supply the money (Rs. 26,000) which is proposed to be expended in draining the Buradand and the neighbouring parts, and in constructing a pucca road down the middle of the Buradand.

(12) To have the town properly surveyed and levels taken of its different parts, and a scheme prepared and gradually carried out, some progress being however made every year.

(13) To have the sidedrains to the chief strerts as well as those in the crowded localities and scheme and several pucca, shallow, and saucer-shaped. (14) To see that wherever pucca drains are provided

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the house drains have pucca connections with them. (15) To ask the Local Government to intimate to other Local Governments in India that subscriptions are invited to provide Puri with a pure water-supply to diminish the excessively heavy incidence of cholera among the pilgrims. (16) To have the conservancy establishment strictly supervised, the work of each man being apportioned to him and that work taken from him in full. Also to make careful inquiries whether the establishment which the Commissioners pay for is really and fully employed or not. (17) To increase the number of draught cattle for conservancy carts. (18) To require the people to bring out at an appointed hour all house rubbish and deposit it on the roadside for removal by the conservancy carts, the present accumulations around and at the backs of houses being removed at the cost of the owners. To provide wheel-barrows for the proper conservancy of the narrow lanes. (20)introduce barrel-carts for the removal of the fluid refuse from the houses, at least from those in the crowded quarters, to the trenching ground for disposal, until such time as it can be discharged into pucca public drains. (21) Not to allow cow and cattle ordure to be stored up within the house premises, but to have it either converted into cakes for fuel or removed to the fields as manure at frequent intervals, or deposited on the roadside for removal along with the street sweepings. (22) To construct more public latrines at convenient places and set apart some of them and a few of the existing ones for the exclusive use of females. Also to consider the advisability of introducing the corrugated iron latrines called Hornbury's patent and sold by Messrs Burn & Co. of Calcutta. (23) To consider the desirability of attaching a mether to each of the public latrines. (24) To have the latrines intended for patent and sold by Messrs Burn & Co. of Calcutta. (23) To consider the desirability of attaching a mether to each of the public latrines. (24) To have the latrines intended for females attended to by methranies only. (25) To properly carry out the dry earth system in all the public latrines at least during the dry months if found impracticable during the rains. (26) To tar the gumlahs, the drains and the walls of the public latrines at least once every month. (27) To induce those of the inhabitants who can afford the cost of construction to provide themselves with proper surface privies which can be cleaned easily. (28) With the gradual increase in public latrine accommodation to adopt stringent measures to suppress promiscuous defocation. (29) To fully and properly work Part IX of the Municipal Act, and with its assistance keep the town quite free from any focal accumulation. (30) To modify the present trenching system, and have the trenches dug in lines one foot deep and one foot wide and only a foot apart, and put only six inches of night-soil into them, the remainder being filled with earth. Also to cultivate the land thus manured. (31) To carefully consider the expediency of constructing a properly appointed market. (32) To insist upon deep burials in every case, the chapper being placed at least four feet below the surface of the ground. Also to see that interments are carried on in regular lines with fixed distances between each grave and each row of graves. (33) To at once prohibit intramural burial which is carried on by the Boistoms, graves. (33) To at once prohibit intramural burial which is carried on by the Boistoms, graves. (33) To at once prohibit intramural burial which is carried on by the Boistoms, the Mohants, and the Muthdars, and to provide without delay a public burial ground at some convenient place for the use of these sects. (34) To have the clothes, &c., of the deceased invariably destroyed by fire. (35) To consider the desirability of burning the Hindu pauper dead instead of burying them in shallow, ill-covered graves. (36) To have the rubbish collected around and at the backs of the lodging-houses carted off at the cost of the offenders. Also in very bad cases to cancel or suspend the licenses of some of the recusants to serve as an example to others. (37) To fix, after an examination of the place, the number of persons to be allowed to put up in each lodging house, and mention it in the licenses, any infringement of this being made penal. (38) To overcome the opposition of the people to vaccination by the strict enforcement of the compulsory law on the subject, particularly its penal provisions. particularly its penal provisions. (39) The appoint a permanent vaccinator to carry on operations all the year round and put the town into a proper state of protection. (40) To see that, besides the children born during the year, a certain number of the older inhabitants also are vaccinated. (41) To require the molnuring specially appointed for registering births and deaths to go round the various wards under their respective charge, visiting one or two every day, and try to detect all omissions of the requirements of the law, the offenders being always handed up to justice (42) To require the conservance is modern to do this being always handed up to justice. (42) To require the conservancy jemadars to do this part of their duty more satisfactorily than heretofore. (43) To ask the overseers and tax-collectors to assist in detecting all evaders of the law, the required information being easily procurable by them during their ordinary rounds in the discharge of their proper duties. (44) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—It was resolved. (1) To enquire carefully and put a stop to the use of laterite over a layer of street rubbish in repairing roads. (2) To measure all the roadside lands and ascertain all encroachment cases. (3) To see that when any new house is built the suggestion about the proper provision of ventilation is observed. (4) To request the Vice-Chairman to enquire and report if there exist any pits in any ward in order that measures under section 232 of the Act may be adopted, as well as to see that no such pits are newly made in any part of the municipality. (5). Until regular drainage is provided, to make proper arrangement for the removal of sewage, &c., from the cess-pits under the verandahs. (6) To request the Vice-Chairman to take steps to have the town surveyed and levels taken for introducing a proper drainage system. (7) To make an application through proper channel to the Local Government to move the Supreme Government for sanction to ask the chief and opulent inhabitants of India to favour the municipality with subscriptions for carrying out the water-supply scheme which has been already reported to Government (8) To direct the Overseer and the Nuisance Inspector to put a stop to the practice of storing cowdung, &c., within house premises, and to see that

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in future it is deposited in convenient places outside the houses for disposal by sale. (9) Until permanent latrines can be provided, to ascertain how many temporary latrines will be required during festival seasons and the cost of erecting them. (10) To request the Vice-Chairman to (a) report if there is sufficient work for the male and female sweepers employed for cleaning private latrines, if not, what reduction can be effected in the establishment, and also if the present scale of pay of female sweepers admits of reduction or not; (b) report further regarding the sufficiency or otherwise of the additional bullocks and carts satistioned lately for carrying on the conservancy works of the English quarter and part of Ward VI. (11)To fix 7 AM. as the hour when the people will deposit all house rubbish on the roadside for removal by the conservancy carts. (12) To purchase two wheelbarrows from Calcutta for experimental use. (13) To purchase six barrel carts from Calcutta one for each ward, for removing fluid refuse from the cess-pits. (14) To enquire from Messrs. Burn & Co. the cost of Hornbury's pattern corrugated iron latrines, and purchase one or two in the current year if funds are available. (15). To make arrangement for employing from the existing establishment more methers to clean public latrines as often as required. (16) To direct the Overseer and the Nuisance Inspector to attend strictly to the suggestions to carry out the dry earth system in the public latrines properly and to tar the gumlahs, &c, of these places. (17) To induce those who can afford the cost of construction to provide themselves with pucca privies. (18) To take all possible steps to keep every part of the municipality clean at the time of the festivals. (19) To carry out the suggestion about the shallow trenching of night-soil. (20) To direct the overseer to explain to the leading Mahomedan gentlemen of the town the suggestions for carrying on interments properly, and advice them to bury the dead bodies in deep graves. (21) To forwar

It is reported that measures are being adopted to give effect to the above resolutions, and that the result will be communicated in due course.

Serajganj Town.—Inspected in January 1887.—I inspected the town in company with the Chairman—a native gentleman—and the medical officer, and found it in a bad condition. Its features had greatly changed by the shifting of the main channel of the Brahmaputra, which is now more than two miles away. Serajgunge was formerly estremed a healthy place, but now it has become afflicted with fever of a malarious character. This, no doubt, is due to immense pits of great depth and size and of irregular outline, and generally recking with decaying vegetation, having been dug for taking earth for the construction of roads and the raising of house plinths, the level of the place being low. These coupled with want of proper conservancy were seen to constitute the chief danger to public health. The drainage too was very defective—in fact, the existence of so many pits rendered it a matter of extreme difficulty. The water-supply was not sufficient for local requirements, and was of bad quality. To complete the chain of insanitary conditions, intramural burial was being carried on indiscriminately to the detriment of health, the dead being sometimes buried in the same room the people live in, under the belief that the souls of their deceased relatives will thereby be sheltered in a cool place and be never disturbed by the sun and rain. All these combined have tended to greatly lower the health status of the place. I was after all glad to find that the Commissioners were trying to remedy some of the cvils noted above.

The suggretions were:—(1) To continue to devote year after year a fair proportion of the revenue to place the town, particularly such parts of it as Malsapara. Dhanbandi, Pakuria, Duttabari, Putiabari, Kayapati, &c., that are very unhealthy, on a thoroughly sound sanitary footing. (2) To consider the desirability or rather the necessity of slightly raising the taxes so that more money might be available for gradually remedying the defects under the several branches of sanitation and carrying out permanent sanitary works. (3) To see that the sanitary clauses of the Municipal Act as far as they are in operation are administered satisfactorily. Also to introduce a code of bye-laws framed under the abovenamed enactment. (4) To gradually metal the kutcha roads, a certain length being done every year. (5) To strictly enforce in future sections 202 and 204 of the Municipal Act, and prevent encroachments on roads and drains, dealing with the existing ones in the best manner possible. (6) To encourage by all means the use of zinc and corrugated iron for roofing in the gunge. (7) To pay much attention to section 195 of the Act, and require the house-holders to keep their holdings free from jungle. Also, to have the bamboo clumps at places thinned. (8) To connect the pits and hollows with one another, and try to introduce river water into as many of them as possible. (9) To fully utilise section 132 of the Municipal Act and prohibit the making of excavations at random. (10) To largely employ street-sweepings and the solid refuse from the houses in filling up pits and holes when they are at a distance from dwelling places, care being however taken to select only a few of these at a time so that thoy may be dealt with within a short period. (11) To consider the expediency of annually setting apart a small portion of the income for filling in some of the worst excavations with mud and sand from the river churs. Also to induce the rioh owners of some of these to convert them into proper drinking tanks, utilizing the earth tak

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drains. (13) To divert the drains as far as possible from emptying into roadside tanks. (14) To have the private tanks kept in proper state or filled up. (15) If the tank which is proposed to be dug in memory of the Jubilee year proves a success, to gradually provide in central positions one or two more of the same sort which might be of smaller size. To properly protect the kutcha municipal wells from pollution. (17) In sinking wells in future, to take care to surround their mouths with masonry platforms and parapets, and to provide light wooden covers for the top with an aperture in the centre for admitting vessels. Also to construct a shallow drain around the rim of the platform, and connect it with another drain so that the spill water may be carried to the nearest public drain or to a safe distance from the well. (18) To supply all the municipal wells with buckets and chains with pulleys for drawing water and prohibit the promiscuous dipping of versels into them. (19) To sufficiently strengthen the conservancy establishment and increase the number of carts. (20) To have all the principal streets swept daily, and the lanes and by-paths at least twice a week, and the sweepings regularly removed. (21) To require the people to bring out at a fixed hour all house rubbish and deposit it on the roadside for removal by the conservancy carts. (22) To deal with the cess-pits within the house premises according to the provisions of the law. (23) Not to allow cow and cattle ordure to be collected within the compounds of houses, but have it either made into cakes for fuel or deposited in the fields as manure. (24) To provide more public latrines at convenient places, and exclusively reserve some of them for females. Also, instead of constructing latrines on the ordinary plan, to adopt the use of Hornbury's patent corrugated iron latrines obtainable from Messrs. Burn & Co., of Calcutta. (25) To have the latrines intended for females attended to by methranies only. (26) To induce those of the inhabitants who can afford the cost of construction to build for them proper surface privies which can be easily cleaned. (27) With the gradual increase in both the public and private latrine accommodation, to make persevering Also to construct a shallow drain around the rim of the platform, and connect it with gradual increase in both the public and private latrine accommodation, to make persevering endeavours to put down promiseuous defectation. (28) To import a sufficient number of methers to properly work the provisions of Part IX of the Municipal Act. (29) To abandon the present trenching system, and in future have the trenches dug in lines one foot abandon the present trenching system, and in future have the trenches dug in lines one foot deep and one foot wide, and a foot apart, these being only half filled with foecal matter, and the remainder with earth. Also to undertake the cultivation of the trenching grounds and demonstrate to the public the value of this rich manure with a view to its ultimately being turned to advantage. (30) To require the owner of the market to early provide it with pucca shallow drains and gradually pave the floors. (31) To consider the advisability of establishing a properly appointed municipal market. (32) To build a public slaughter-house on a small scale, with proper drainage, water-supply, and other conveniences. (33) To provide the proposed graveyards without delay, and as soon as this is done to strictly prohibit interments within house premises, and require the people to plant all private burying places with trees. (34) To methodically carry on burial in the grounds to be provided in order that they may serve their purpose longer than usual, the graves being dug in lines with fixed spaces between each grave and each row of them. Also to see that bodies are buried deeply, there being at least four feet of earth over the *chupper* which is usually placed in Mahomedan graves. (35) To close the pauper burial ground which is too near the dispensary, and either select some other site or set apart a portion of the public one to be shortly established. Also to have the former dug over or ploughed, and planted with rapidly growing trees and shrubs. (36) To have the clothes, mats, &c., of the deceased always destroyed by fire. (37) To adopt stringent measures to put down the odious practice of throwing uncremated or partially cremated bodies into the fiver of ring the rains, and to invariably prosecute the offenders. (38) To do the best to except a big tank at the centre of the series of pits a mile in length in the midst of the gunge, using the earth obtained therefrom in filling up surrounding pits and hollows, and converting the level ground thus acquired into a public garden. (39) To make every endeavour to diminish as much as possible the offensiveness of the dirty cess-pools that chiefly contribute to the outbreak of malarious fever. (40) To consider the desirability of providing the cooly lines of the jute factory with Hornbury's pattern latrines with separate erections for men and women. (41) To see that in future the lines are more regularly built with definite spaces in front of or between each line for the free passage of air. Also while improving old busties to request the managers to lay down the lines according to which houses are to be built. (42) To fully utilize the provisions, particularly the penal ones, of the Compulsory Vaccination Act. (43) To have not only the number of births during the year overtaken, but also a certain number of the older inhabitants vaccinated. Also to see that vaccination is practised among the up-country coolies. (44) To consider the advantage of appointing, in place of the two chuprassies, a permanent Registrar who would register all births and deaths during certain hours of the day and during

Registrar who would register all births and deaths during certain hours of the day and during certain others go round the various wards alternately visiting one or two every day and try to detect all evasions of the requirements of the compulsory law. (45) To require the tax-collector to report regularly all births and deaths as a check on voluntary registration. (46) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—(1) Endeavours will be made to metal the kutcha roads gradually. (2) A code of bye-laws has been framed and submitted to Government for confirmation. (3) The excavations in the centre of the gunge have been connected with one another and with the river, and those behind the Kayapati and the Kapuriapati with the Telkupi khall. (4) Section 232 of the Municipal Act is being strictly observed and the making of new holes no longer permitted. (5) Two additional conservancy carts have been constructed, and four more street sweepers employed. (6) The lands that were selected

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for establishing burial-grounds have been ordered to be used in anticipation of their acquirement by Government declaration. (17) The services of the two registration chuprassies have been dispensed with and a Registrar appointed in their stead. (8) The overseer and the mohurir have been directed to verify the record of births and deaths by contantly enquiring into the subject during their daily rounds.

It was also reported that some of the other suggestions were under the consideration of the Commissioners, and that provision had been made in the ensuing year's budget estimates for carrying out some of them.

Faridpore Town.—Inspected in January 1887.—I went round the town in company with Baboo Ambica Charan Mozumdar, Chairman, and Baboo Khurgeshur Bose, Medical Officer, and was glad to find that the place had considerably improved since last visit, particularly as regards drainage. It appeared that the Commissioners were taking interest in its sanitary welfare. Many grave defects calling for early reform were, however, still to be met with under the several heads of sanitation. The town, moreover, abounded with filthy pits and water-holes, and jungle was also very dense in some of the outlying villages and prevented the drying up of the surface. In fact, much had yet to be done to place the

prevented the crying are town on a proper sanitary footing.

The sugmentions were:—(1) To allot annually a fair, and equitable share of the income defeate (2). To show greater activity in the to gradually remedy the existing sanitary defects. (2) To show greater activity in the administration of the sanitary clauses of the Municipal Act. (3) To consider the expediency of gradually metalling the kutcha roads. (4) To interfere as little as possible with the fine avenue of pipul trees which must be a great comfort to the people in the hot season. (b) To require each house-holder to keep his holding clear from undergrowth. (6) In dealing with jungles to have the plants, as far as possible rooted up, and not out only, and after being allowed to dry for a few days, burnt on the ground, or utilized as firewood. (7) To have all water-holes and depressions, as far as practicable, connected with wood. (7) To have all water-holes and depressions, as far as practicable, connected with one another and with the drainage system, so that they may be flushed out yearly, and become shallower from deposit of silt. (8) To consider the advisability of acquiring a few of the large excavations in central positions and converting them into proper drinking tanks, employing the earth which would then become available in filling in smaller holes around. (9) To make a commencement in the direction of providing puccas shallow saucer-shaped drains in the crowded quarter of the town, and construct a certain length every year till the need for this sort of drains is thoroughly met. (10) To consider the desirability of re-excavating the tank near the kutcheries. Also to thoroughly protect its south and from inward drainage from the neighbouring reverse house, and hove protect its south end from inward drainage from the neighbouring pucca house, and have the branches of a few trees on its south side lopped off. (11) To prevail upon the rich owners of some of the filthy private tanks to re-excavate them and have them properly protected from pollution and reserved for drinking. (12) To take steps to connect all foul tanks with one another, and introduce flood water into as many of them as possible. (13) To have the tanks as are useless or cannot be maintained in proper order, filled up. (14) To try one or two good wells as an additional means of water-supply. (15) (16) adequately increase the conservancy establishment as well as the number of carts. provide a few wheel-barrows for the proper conservancy of the narrow lanes. (17) To strictly require the proper to bring out all house-rubbish at an appointed hour, and deposit it on the roadside for removal by the conservancy carts. (18) Not to permit the accumulation of dung, &c., within house premises, but to have it either converted into cakes for fuel or removal at frequent intervals to the fields as manufactured. (19) To gradually provide a sufficient number of public latrines at convenient places, and reserve a few of these for the exclusive accommodation of females. Also to consider the advantages of adopting the use of Hornbury's pattern corrugated iron latrines, obtainable from Messrs. Burn and Co. of Calcutta. (20) To have the latrines for females attended to by methranies only. (21) To induce those who can afford the cost of construction to provide for themselves proper surface privies which can be cleaned easily. (22) To carefully work Part IX of the Municipal Act, and never allow feecal matter to remain undisposed of for more than 24 hours. Act, and never allow feecal matter to remain undisposed of for more than 24 hours. (23) To modify the present trenching system and strictly act upon the instructions given on the subject in the last Inspection Report. Also to cultivate the trenching ground. (24) To require the owner of the market to improve its condition generally, and keep the place as clean as possible. (25) To extend, if found necessary, the area of the public burial-ground for the Mahomedans. Also to advantageously utilize the spaces between each grave and each row of graves, that are sufficiently large for the purpose, and have bodies buried much more closely than at present. (26) To see that the chapper which is usually placed in Mahomedan graves is at least 4 feet below the ground surface. (27) To provide public cemetries at the outskirts of the town, but well away from the inhabited quarters, for the use of the Mahomedans living in the Suburban villages, and ask them to plant all private gravevards with trees. Also to permit no hardprovide public cemetries at the outskirts of the town, but wen away from the inhabited quarters, for the use of the Mahomedans living in the Suburban villages, and ask them to plant all private graveyards with trees. Also to permit no burial within the limits of the town except in the places fixed by the Commissioners. (28) To have the clothes, pillows, &c., of the deceased always destroyed by fire and not thrown into the river. Also to take stringent measures to prevent the throwing of uncremated or partially cremated bodies as well as carcases of animals in it. (29) After the introduction of the Compulsory Vaccination Act to fully utilize its provisions, particularly the penal ones, and put the town into a state of proper protection. (30) To strictly enforce the provisions of the Compulsory Registration Act. (31) To require the Overseer, as well as the Conservancy Inspector to regularly report all births and deaths as a check on voluntary

registration. Also to systematically prosecute all evaders of the requirements of the law.

(32) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—(1) Steps have been taken for improving the condition of such localities as Kamalpore, Goalchamat, &c., that are unhealthy. (2) The new Courthouse Street has been levelled and metalled at a cost of Rs. 500. (3) Several culverts have been constructed to allow the flood water free passage through the town to the Dhole Samudra in the south. (4) The kutchery tank, known as the Laldighi, has been re-excavated and protected from inward drainage. The trees on its south bank as well as the overhanging branches of those on the east have been cut down, and a pucca ghât has been constructed on the south side for the convenience of the people frequenting the new court-houses. (5) The conservancy establishment has been increased from 15 to 28 methers. (6) Two additional carts and a pair of bullocks have been provided. (7) All the streets are now being daily swept, and the lanes, &c., once or twice a week, and the sweepings and house refuse utilized in filling up pits and hollows. (8) The cleaning of the latrine attached to the new court buildings have been undertaken. (9) Part IX of the Municipal Act has been brought into force. (10) Greater attention is being paid to the conservancy of the lodging-houses. (11) The Compulsory Vaccination Act has been introduced, and a vaccinator has been appointed and a vaccine station established.

Goalundo Town.—Inspected in January 1887.—The town, situated as it was on a chur of the river Pudmed, was liable to be inundated and washed away during the rains, the latter circumstance necessitating the periodical shifting of its site. The Commissioners were therefore precluded from undertaking any structural improvements involving outlay of money. Considering its precarious condition, the sanitary arrangements seemed unobjectionable but capable of much improvement at a small cost.

The suggestions were:—(1) To induce the people, when building on new sites, to have the plinths of the houses raised as much as possible. Also to encourage the use of machans or other suitable conveniences of the sort to sleep on. (2) To have as many of the pits as possible connected with one another and properly drained by means of a suitable outlet channel. (3) In future when settling on a new site to require the people not to dig holes at random but to take earth from a few of these so that the big ones thus formed could be easily turned into serviceable tanks. (4) To keep the existing drains free to act, and prohibit the threwing of rubbish into and the taking of earth from them. (5) To make proper cuts to drain such places where water is found to accumulate and stagnate. (6) To sink a few wells at convenient places and set them apart solely for drinking. (7) To consider the desirability of giving small sums to owners of filthy excavations requiring help to enable them to dig these out into useful tanks that are to be reserved for drinking purposes. (8) To supply a few more hand or wheel-barrows so that the removal for drinking purposes. (8) To supply a few more hand or wheel-barrows so that the removal of filth and street-sweepings might be greatly facilitated. (9) To improve the condition of the existing public latrines and keep them properly clean and sweet. Also to consider the advisability of providing one or two corrugated iron latrines of Hornbury's pattern. (10) To ask the Railway Company to improve and properly look after the latrine near their engine shed. (11) To import methers and fully utilize the provisions of Part IX of the Municipal Act. (12) To have a portion of the chur well removed from the inhabited quarters set apart for the burial of night-soil from all the public and private privies, and prohibit its disposal at other places. (13) To see that the conservancy of the serais and lodging-houses is efficiently attended to and that they are provided with a sufficiency of latrines. (14) To take steps to introduce the Compulsory Vaccination Act into the town. (15) To fully utilize the provisions of the Compulsory Registration Act. (16) To require the overseer to perform his duty in connection with registration more satisfactorily than at present. Also to ask the tax-collectors to report all deaths as a check on voluntary registration and try to detect all evasions of the requirements of the law, the offenders being always prosecuted. (17) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—Nothing is possible in this direction. The Magistrate reports that the entire site of the municipality has been washed away by the river Pudma.

Hughli Town .--Inspected in February 1887.—I inspected various parts of the town, and was glad to find evidence of interest taken by the Commissioners in its sanitary welfare. Many improvements had been carried out since it was last visited, but its condition was still far from being satisfactory. There were several grave defects, particularly under the heads of drainage and water supply, which must be remedied before any high standard of health can be looked for. Parts of the town. moreover, abounded with foul pits and water-holes full of decaying vegetation, and the overgrowth of jungle in places was also very great and prevented free evaporation and drying up of the surface—conditions highly inimical to health. The arrangements regarding disposal of the dead, as far as interments were concerned, were

extremely objectionable and required urgent rectification.

The suggestions were:—(1) To devote, according to the standing orders of Government on the subject, the whole of the money become available by the withdrawal of the Police charges and its non-replacement by the dipensary charges (the lighter of the two), except what is spent on education, for removing the insanitary conditions that still exist. (2) To take sters to introduce so much of the omitted portions of Part VI of the Municipal Act as bear on the construction of huts and houses. Also to display greater activity in the administration of the sanitary clauses of the Act. (3) To consider the desirability of metalling a certain length of the kutcha roads every year. (4) To continue the

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present plan of casting rubbish on the sides of some of the roads as it greatly improves their breadth, but only in localities somewhat removed from inhabited houses. (5) To require householders to keep the surroundings of their houses clear of jungle, cultivation of the ground as gardens being the best method of attaining this object. (6) To clear away trees and bamboos over-hanging tanks, and see that more sun and air are permitted to get at the soil about houses. (7) To strictly enforce section 232 of the Municipal Act, and put a stop to the making of further exeavations, (8) To fully utilize street-sweepings, &c., in filling up existing hollows when they are at a distance from homesteads, taking up only a few at a time so that they may be quickly filled up. Also to use for the purpose earth procurable from the churs thrown up by the river for a long distance on the river face. (9) To acquire some of the larger hollows conveniently situated, and have them converted into good drinking water tanks, the surplus earth taken out being employed in filling of surrounding holes and depressions. (10) To consider the advisability of contributing small sums of money annually to one or two of the owners of other excavations desirous of treating into good drinking water tanks, the surplus earth taken out being employed in filling of surrounding holes and depressions. (10) To consider the advisability of contributing small sums of money annually to one or two of the owners of other excavations desirous of treating them in the manner indicated above. (11) To have the town properly surveyed and levels ascertained, and an efficient system of drainage gradually provided, some progress being made every year, and care being taken to have the drains as far as possible diverted from emptying into the roadside tanks and water-holes. (12) To push on the provision of pucca shallow saucer-shaped sidedrains in the crowded localities. (13) To ask house-holders wishing to construct drains in front of their houses to do so according to the plan to be provided by the municipality. Also encourage the use of Ranigunge half-drain pipes as being very well suited for the purpose as well as for pucca drains inside houses and for connecting house with public drains. (14) Not to allow the existing drains to be obstructed with banks of earth by owners of gardens adjoining them, the evil being easily overcome by the use of drain pipes. (15) After the tanks, one at Balli and the other at Kadamtollah, are acquired, to have them re-excavated, properly protected from in ward drainage as well as from other sorts of pollution, and reserved solely for drinking, each one of them being moreover provided with one or two pucca ghats for drawing water. (16) To have such of the tanks as are useless, or cannot be kept in a wholesome state, filled up. (17) To induce the rich owners of some of the tanks to have them re-dug, protected from pollution and reserved for drinking and culinary purposes. (18) To take up in right earnest the question of supplying the town with filtered water, and do the best to promote and carry out this laudable project, joining, if possible, in the preparation of the scheme for the supply of filtered water to the riparian towns ble, in the preparation of the scheme for the supply of filtered water to the riparian towns on the west bank of the Hughli as far as Serampore, and asking the intermediate towns of French Chundernagore, Bhudreswar and Baidibatty to co-operate in this grand movement. Also not to throw up the project, because it seems to be expensive, but to cause a proper esti-Also not to throw up the project, because it seems to be expensive, but to cause a proper estimate of the work to be prepared, and then consider the ways and means and see how much of the estimated amount can be raised by subscription. (19) To consider the desirability of acquiring a lease of the series of shallow pends made by the railway authorities in constructing the branch line leading to the Hughli Bridge, of converting two or three of these into good deep, tanks using the earth taken out to fill up shallow places, and of laying out a garden round them and maintaining it at small expense as a Jubilee memorial, part of the money subscribed for this purpose being devoted to its creation. (20) To adequately strengthen the conservancy establishment, increase the number of carts, and have the establishment strictly supervised. (21) To provide more wheel-barrows for the proper removal of filth and sweepings from the narrow lanes and by-paths. (22) To have not only the thirteen roads mentioned in the municipal memorandum book swept, but to see that others as thirteen roads mentioned in the municipal memorandum book swept, but to see that others as well as lanes receive this attention at least twice a week. (23) To include drains among surface cleansing, and thereby keep them permanently clean. (24) To provide a few barrelearts for the removal of fluid house and kitchen refuse to the trenching ground for disposal, until such time as it can be discharged into pucca shallow public drains. (25) To require the result to bring out at the appointed hour all house rubbish and deposit it. the people to bring out at the appointed hour all house-rubbish and deposit it on the road-side for removal by the conservancy carts. (26) To provide more public latrines at convenient places and set apart some of them for the exclusive use of females. Also, instead of constructing latrines on the ordinary plan to gradually adort the constructing latrines on the ordinary plan, to gradually adopt the corrugated iron structures, called Hornbury's patent, obtainable from Messrs. Burn & Co., of Calcutta. (27) To have some of the existing latrines which have gone out of use from removal of the mat-walls, enclosed either with mats or corrugated iron, the latter for choice. (28). To have the latrines intended for females attended to by methranies only. (29) To introduce the dryearth system and properly carry it out in all public latrines, the mether in attendance being required to pour a sufficient quantity of dry-earth in the feecal gumlah at frequent intervals.

(30) To induce those who can afford the cost of construction to provide themselves with proper surface privies which can be cleaned easily.

(31) To carry on the trenching system proper surface privies which can be cleaned easily. (31) To carry on the trenching system in the manner recommended in the last Inspection Report, and when a portion of the ground is well manured, to have it cultivated. (32) After the private markets are licensed, to insist on the owners gradually improving the condition of these places, and provide proper latrines and urinals near them for the use of the market people. (33) To enforce section 252 of the Municipal Act which provides for the registration of shops for the sale of European medicinal drugs and the appointment of certificated compounders. (34) To close all private graveyards within the compounds of houses, disarming the opposition of the Mahomedan community to the measure by explaining to them the evils of the present practice, and if necessary, by enforcing the provisions of the law on the subject except in the few cases where it sary, by enforcing the provisions of the law on the subject except in the few cases where it would be expedient to continue the present practice. (35) To consider the desirability to establishing a few public graveyards on the outskirts of the town well away from the

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inhabited quarters. (36) To see that in the existing cometeries graves are dug in regular lines with fixed distances between each grave and each row of graves. (37) To have the mats, pillows, &c., of the deceased always destroyed by fire. (38) To carry on vaccination more actively than at present, and have not only the number of births during the year overtaken, but also a certain number of those who are still unprotected vaccinated. (39) To require the conservancy overseers and the ameens to report all births and deaths as a check on voluntary registration, all evaders of the law who would be thus detected being always prosecuted. (40) To induce the midwives to give information of all births which they attend.

Action taken on the suggestions:—Nothing adequate seems to have been done in this direction. It was simply reported that the instructions with regard to the weeding out of jungle and eleansing of tanks were translated into veruscular, and printed copies of same were distributed among the people to impress upon them the necessity of adopting the suggestions for the sake of their health.

Burdwan town.—Inspected in February 1887.—I inspected this town in company with Baboo Nalinaksa Basu—the Chairman, the Vice-Chairman Baboo Mohendra Nath Pundit, and the Secretary. Before, however, visiting the several places, I discussed with these gentlemen the sanitary and the financial condition of the municipality, and heard their views concerning sanitary necessities. It appeared that the coarrying out of the grand water-supply scheme had taxed the energies of the Commissioners to the utmost, and put a severe strain upon the finances of the town, and for the time being prevented them from directing their attention to other branches of sanitation. So the defects that were noticed on the last occasion still existed; but the Commissioners seemed to be aware of these.

The suggestions were:—(1) To continue to carry out sanitary improvements till the whole town is placed on a satisfactory sanitary position. (2) To favourably reconsider the question of fully utilizing section 236 of the Municipal Act, and gradually doing away with straw, &c., as roofing materials. (3) To re-open the outlet for the drain or most on the south of the Rajbari, and allow free flow of drainage water. (4) To look after all the natural drainage channels through the town and have irregularities of bottom removed. (5) To drainage channels through the town and have irregularities of bottom removed. (5) To have the town properly surveyed and a complete scheme of drainage undertaken and gradually carried out, one section being taken up one year and another section the following year as funds permit. (6) To provide pucca saucer-shaped sidedrains in the crowded localities and along the principal thoroughfares and use half Ranigunge drain pipes for the purpose. Also to see that wherever pucca drains are constructed all house-drains have pucca connections with them. (7) To take early steps for increasing the present filtered water-supply. (8) To serve notices upon the owners of filthy tanks first to de-water and then to fill them up, the Commissioners assisting in this with dry sweepings. Also to have all places filled with this stuff covered with dry-earth, ashes or einders. (9) Not to use sweepings for tank filling in crowded localities during the hot and rainy seasons when holes in outlying places may be chosen with no houses near. (10) To ask the Raj Estate to permit outlying places may be chosen with no houses near. (10) To ask the Raj Estate to permit persons to remove 'earth from the mound surrounding the Kristo Saugor, not generally as they pleased, but from fixed places and with fixed limit as to amount to be removed. (11) To consider the desirability of annually setting apart a small portion of the income for filling in some of the worst pits and hollows with earth from the Kristo Saugor. (12) To give early effect to the suggestions offered under the head of conservancy in the last Inspection Report. (13) To provide a few more rubbish carts, the existing ones being insufficient to remove the street-sweepings, &c., from nearly 49 miles of road surface. (14) To require the people to bring out all house who his at an appointed hour and put it on the roadside for removal by the conservancy carts, the existing accumulations in and around the houses being removed at the cost of the offenders. (15) To include drains among surface cleansing, and thereby keep them permanently clean. (16) In future, to construct latrines at convenient places as their usefulness depends on their being easily accessible by the people. (17) To introduce Part IX of the Municipal Act into the north part of the town. people. (17) To introduce Part IX of the Municipal Act into the north part of the town. (18) To carry on the trenching system properly, the trenches being dug in lines one foot deep and one foet wide and only six inches of night-soil put into them, the remainder being covered with earth, and demonstrate the wonderfully fertilizing power of this manure. Also to provide for shallow trenching one or more plots of grounds convenient to the more distant latrines. (19) To ask the Burdwan Estate to carry out the suggested improvements in the Banigunge and Burrabazar markets. (20) To take steps to gradually improve the condition of all the markets, and to supply a urinal in the vicinity of each of them. (21) Not to lose sight of the suggestion offered in the last Inspection Report regarding the provision of a good slaughter-house. (22) After the proposed burial-ground for the Mahomedans is established, to permit no more burials inside the grounds in the town. (23) If the proposal to build a new burning ghat on the north bank of the Banka river below the Kali Basar Aniout, be adopted, to provide a pucca enclosure for the purpose as well as a shed to shelter from the weather persons bringing bodies for cremation. (24) To adopt stringent measures to carry out the provisions of the Compulsory Vaccination Act, and to have not only all the children born during the year, but also a certain number of those who are still unprotected, vaccinated. Also either to cause operations to be performed all the year round or to temporarily appoint a second vaccinator for the vaccination season, so that the work may be considerably pushed on. (26) To require the tax-collectors and the overseers to report all births and deaths as a check over voluntary registration, all omissions thus brought to light being always prosecuted. (26) To induce the midwives to give information of all births which they attend.

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Action taken on the suggestions:—(1) The expenditure on schools has been considerably curtailed. (2) Steps have been taken for making a survey of the town with siderably curtailed. (2) Steps have been taken for making a survey of the town with the view of ascertaining the levels preliminary to the preparation of a scheme of drainage. (3) Saucer-drains will be constructed when the drainage scheme is taken in hand. (4) Attempts will be made to acquire suitable sites for trenching grounds, and the Secretary will be directed to select one on the southern side of the Banka. (5) Provision will be made in the next year's budget estimates for two more rubbish carts as well as for the erection of a few urinals at suitable sites. (6) The question of building a slaughter-house will be considered when the next budget estimates are prepared. (7) The proposed burning ground beyond the Kali Bazar Anicut will be properly enclosed, and a shelter shed will be erected for persons bringing bodies for cremation. (8) The conservance overseers and the texfor persons bringing bodies for cremation. (8) The conservancy overseers and the tax-collecting sircars will be directed to report all births and deaths

Ranigunge Town.—Inspected in February 1887.—Ranigunge is almost entirely the property of the Bengal Coal Company, whose mines are on the west side between the town and the river Damudah, on the bank of which the houses of several of the employes are situated. I inspected the place in company with the Vice-Chairman, several native Commissioners, and Mr. Hill, the zemindam manager of the Bengal Coal Company, and also a Municipal Commissioner, and was disappointed to return after nearly 15 months to see that very little had been done to materially improve its sanitation. There was evidence of neglect on all sides. The insanitary conditions that were noticed on the last occasion still existed to the detriment of public health. In fact the indifference of the Commissioners to attend to the

the detriment of public health. In fact the indifference of the Commissioners to attend to the sanitary concerns of the town and carry out the good advice given in the previous Inspection Report greatly struck me, and reflected discredit on the municipal self-government here. Another thing which I was sorry to notice was the unfortunate habits of the people as to drinking. They frequent the numerous outstills and get drunk freely.

The suggestions were:—(1) To devote annually a fair share of the income for the rectification of the existing sanitary defects. (2) To consider the desirability of slightly raising the taxes, so that more money might be available for carrying out important sanitary works.

(3) To strictly enforce the sanitary clauses of the Municipal Act. (4) To deal according to the provisions of the law with the encroachments that are being made by the people building their houses on the slopes of the feeder road. (5) To spread a good thick layer of soal refuse over all holes that are being filled in with street-sweepings. (6) To have a road run right through the Dhobipara busti, and have the locality efficiently surface drained, and provide a pucca well here solely for drinking. (7) To no longer delay the accomplishment of the drainage scheme prepared sometime ago and referred to in the last report. (8) To have all town drainage specially that from pucca drains carried outside the town. (9) Instead of relaying some of the pucca drains with brick work, to use for the purpose half drain pipes made by some of the pucca drains with brick-work, to use for the purpose half drain pipes made by Messrs. Burn & Co. (10) To see that wherever pucca drains are provided all house-drains have pucca connections with them. Also to encourage the use of drain-pipes as very well suited for the purpose. (1f) To sink some wells at convenient places before undertaking the creation of the Sostiguriah bandh, and if funds are then available, to proceed with it. (12) To spend as much money as possible on wells every year until the water-supply be sufficiently increased to meet the requirements of the whole town, and to utilize pottery pipes in place of the ordinary earthen well-rings. (13) To carry out such of the suggestions offered under the head of conservancy in the last Inspection Report as have not yet been stronged to (14). To sholish the contract system for removed of street-sweepings. offered under the head of conservancy in the last Inspection Report as have not yet been attended to. (14) To abolish the contract system for removal of street-sweepings, &c., and take up the direct management of the work. (15) To have the lanes and by-paths swept at least twice a week, and not occasionally as at present. (16) To include drains among surface cleansing, and thereby keep them permanently clean. (17) To remove the existing accumulations of rubbish in and around the houses at the cost of the offenders, and strictly require the people to bring out all house refuse and deposit it on the roadside at the appointed hour for removal by the establishment entertained for the purpose: (18) To no longer allow Part IX of the Municipal Act to remain a dead-letter, but at once take steps to properly work it. (19) To take early steps to remedy the existing defects in the market and gradually improve its condition. (20) To discontinue the practice of throwing the pauper dead on waste lands outside municipal limits to be devoured by vultures, jackals, &c., and have the bodies properly disposed of. (21) Not to allow large number of pilgrims to camp inside the town, but outside it in places provided for them. (22) To take steps withcamp inside the town, but outside it in places provided for them. (22) To take steps without delay to have the necessary structural and other reforms in the cooly lines carried out. Also to improve the drainage and conservancy arrangements of these places, and provide that. With sufficient latrine accommodation and a good supply of wholesome water. (23) To considerably push on vaccination during the ensuing seasons, and place the town in a thorough state of protection. (24) To require the tax-collector, who is also the overseer, and the tax-collecting peons to report birth and deaths regularly as a check on voluntary registration. (25) To induce the midwives to give information of all births which they attend.

Action taken on the suggestions: -It is reported that the Inspection Report will be shortly laid before the Commissioners eat a special meeting, and the suggestions and the resolutions of the Commissioners thereon will be considered in framing the next year's budget.

Deoghur Town.—Inspected in February 1887.—I went over the town in company with the Chairman, Mr. Smith, the Vice-Chairman, and the Health Officer, and met several Commissioners in the course of my inspection and heard their views on different subjects touching local sanitation. The place was much in the condition in which it had been when App. V] lxiv

last visited by me in October 1880. Besides the provision of additional water-supply in the shape of a bandh to the south-east of the town, no other improvements seemed to have been effected during the long interval, nearly six-and-half years, that had elapsed between the present inspection and the last. There were many grave defects, particularly under the heads of water-supply and conservancy, which called for early rectification. The Pandah quarter was in such a filthy and insanitary state that frequent outbreaks of cholera might

be apprehended.

The suggestions were:—(1) To devote annually an equitable share of the income to rectify the existing sanitary defects and gradually place the town on a proper sanitary footing.

(2) To administer the sanitary clauses of the Municipal Act with greater activity than at (2) To administer the sanitary clauses of the Municipal Act with greater activity than at present. To have the conservancy of the narrow lanes properly attended to, to prevent their being turned into repositories of filth of the neighbourhood; also if possible, to take opportunity on the occasion of fires, &c., to widen them. (4) By all means to prevent further encroachments upon roads, and try to remove the existing ones. (5) Not to permit brick-making within the limits of the municipality, as the pits dug very soon become offensive and affect health injuriously. (6) To fully utilize street-sweepings, &c.; in filling up pits and excavations when they are at a distance from the homesteds, care being, however, taken to limit the operation to one or two at a time so that they may be quickly filled up. taken to limit the operation to one or two at a time so that they may be quickly filled up. (7) To consider the desirability of constructing gradually a good pucca road right though the Pandah quarter, opening up as far as possible the crowded parts, a certain length being done every year. (8) To strictly enforce the sections of Part VI of the Municipal Act which refer to building regulations, and prevent the improper laying out and erection of houses without proper provision for ventilation or passages between them for admitting conservancy carts. (9) Not to construct rectangular drains any more, but in future to have them only of saucer shape. (10) To gradually extend the system of pucca drainage and use half Ranigunge drain pipes for the purpose as far as possible. (11) Wherever pucca drains are provided, to insist on pucca connections being made between the house, and the public drains. (12) To at once discontinue the custom of throwing sweepings in the catchment area of any bandh, and either leaving or burning them there. (13) Instead of puttings wooden logs, to build pucca parapets and platforms round the mouths of the municipal well and thereby effectually prevent the re-entry into them of the spill water which should be carried by means of a shallow drain to a safe distance from the well. Also to supply them with buckets and chains with pulleys for drawing water, and prohibit the dipping of private with buckets and chains with pulleys for drawing water, and prohibit the dipping of private vessels into them. (14) To provide a few more public wells of the sort at central positions. (15) To carry out by subscription, and otherwise, the scheme proposed by Mr. Owen for the increased supply and improvement of the chief sources of water-supply. (16) To increase the increased supply and improvement of the chief sources of water-supply. (16) To increase the number of draught cattle for the conservancy carts. (17) To discontinue the performance of all conservancy works indiscriminately by the methers, and have the work of each man defined, and that work taken from him in full. (18) To provide a few more wheelbarrows for the proper conservancy of the narrow lanes. (19) To strictly require the people to bring out all house-refuse at the appointed hour and deposit it on the roadside for removal by the conservancy carts, the existing accumulations around and at the backs of houses being removed at the cost of the offenders. (20) To construct a few more public latrines at convenient places, and reserve one or two of them exclusively for females; also, instead of building latrines on the ordinary plan, to give a trial to Hornbury's patent corrugated iron latrines obtainable from Messrs. But a & Co. of Calcutta. (21) With the increase in public latrine accommodation to adopt strungent measures to prevent promiscuous defocation. (22) To take early steps to introduce Part IX of the Municipal Act. (23) To see that night-soil is not thrown on the ground as at present, but buried in shallow trenches as recommended in the last Inspection Report. Also to acquire or rent land for the purpose at the outskirt of the last Inspection Report. Also to acquire or rent land for the purpose at the outskirt of the town, and when it is well manured, to have it cultivated. (24) To close as soon as possible the Mahomedan burial-ground which is situated in the heart of the town, and to provide another in its stead outside the limits of the municipality, and well removed from the inhabited quarters. Also after the new ground is established, to have the present one planted with rapidly growing trees. (25) To see that the chapper in the Mahomedan graves is placed at least four feet below the ground level. (26) To prohibit the appropriation of the clothes, pillows, &c., of the deceased by the methers, and have these dangerous relies always destroyed by fire. (27) To make arrangements during the ensuing season to considerable destroyed by fire. (27) To make arrangements during the ensuing season to considerably push on vaccine operations. (28) To fully utilize the provisions of the Compulsory Registration Act, particularly its penal clauses. (29) To require the Municipal Overseer and the tax-collecting sirear, who have much out-door work to do. to report all deaths as a check over voluntary registration, all evasions that would be by this means detected being dealt with according to the provisions of the law.

Action taken on the suggestions:—None of them seem to have been actually carried into effect. It is only reported that steps are being taken for introducing Part IX of the Municipal Act, and that resolutions have been passed adopting some of the other recommen-

dations.

Darjiling Town.—Inspected in June 1887.—I inspected the town generally accompanied by the Vice-Chairman and the Engineer, and was glad to observe that several improvements had been carried out since last visit, the chief among them being the construction of stone drains, stone revetments on roads, bathing platforms, tanks for Dhobis, more public latrines, and a slaughter-house at Ghoompahar. In fact it was evident that Darjiling was gradually improving in sanitary condition. The water supply question, however, still

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required attention, and the villages of Ghoom and Jore Bungalow were very dirty and

required to be properly cleaned out.

required to be properly cleaned out.

The suggestions were:—(1) To continue to devote year after year a fair proportion of the income to put all parts of the municipality on a satisfactory sanitary basis. (2) To provide road-fencing wherever required, especially on the western Jellapahar and Auckland roads, where there are several very dangerous places, and to continue the fencing above Boyne Lodge without a break from above Salt Hill to Emerald Benk on the Jellapahar road, (3) To obtain an abundant and much required supply of water by replacing the 4-inch main from Jore Bungalow to the reservoir by a 6-inch one, and transferring the present 4-inch pipe to the Senchal section. (4) To require the overseer to visit the villages of Ghoom and Jore Bungalow more frequently, and see the places properly cleared out. (5) To use Mirzapore stone further extensively for the soling of drains, and also advantageously employ square glazed tiles or slate for the purpose. (6) To request the Agent of the Maharaja of Kuch Behar and all other house proprietors to have house-drains laid down with half drain pipes so that house fluids will be much more quickly and efficiently removed. (7) To have the drain receiving fluid refuse from the Secretariat and neighbouring houses, carried directly down hill past Stortford House without forming the zigzag at Magdala Cottage. (8) To erect a bathing platform in the Bhooteah busti. (9) To provide each of the Dhobis' tanks with a light corrugated iron roof. Also to consider the desirability of building a drying house for washed lothes. (10) To give effect to such of the suggestions offered under the head of conservancy in the last Inspection Report as have not yet been attended to. (11) To make botter arrangements for the proper removal of rubbish, &c., from the villages, and allow no accumulations in the Bhooteah busti as at present. (12) To require the owners of cow-sheds and pig-stys to keep them clean, and not to allow the dung from these places to be accumulations in the Bhooteah busti as The suggestions were:—(1) To continue to devote year after year a fair proportion of the carcases, and take early steps to improve the general condition of these places. (17) To carry out the recommendations made under the head of registration in previous reports. Also to require the Registrar specially appointed for the purpose to go round some of the wards daily and try to detect evaders of the law.

Action taken on the suggestions:—The Inspection Report was referred to a Joint-Committee composed of the Sanitation and Work's Committee members who have lately submitted their report for the consideration of the Commissioners. The Joint Committee report of the gragestions and support expecially that of increasing the water-supply

accept most of the suggestions, and support especially that of increasing the water-supply.

Narainganj Town.—Inspected in August 1887.—Narainganj appeared to be an advancing place in a sanitary sense. Its roads were improved and its bridges were better. Some of the worst hollows had been and some more were being dealt with. A good number of public latrines had been provided and were in good condition. Cooly lines had much improved, and proper conservancy arrangements for these places had been provided. In fact it was evident that the Commissioners were exhibiting commendable interest in the sanitary affairs of the town.

The suggestions were:—(1) To steadily advance in the path of progress till the whole town is placed on a satisfactory sanitary footing. (2) To fully utilize section 227 of the Municipal Act, which requires the provision of drainage for all improperly drained land within 100 feet of any municipal drain, sewer, or outlet. (3) To consider the desirability of metalling a certain length of the kutcha roads every year. (4) To have the pits and hollows flushed with river water all through the system of canals and holes, which exist throughout the place. Also to always keep in view the suggestions made in the last Inspection Propert under this head and as for as possible set upon them. (5) To gradually extend Report under this head, and as far as possible act upon them. (5) To gradually extend the system of pucca drainage and use as much as possible half Ranigunge drain pipes for the purpose. (6) To see that the new culvert across the eastern road south of Messrs. Ralli Brothers' Mill is so made as to drain off and admit river water. (7) To construct a raised road along the south end of the Lyall's tank to protect it from inward drainage from Messrs. Ralli Brothers' cooly lines. (8) If possible, to have all the private tanks connected with the khals, or with the river so as to admit a daily supply of tidal water, tanks connected with the khals, or with the river so as to admit a daily supply of tidal water, and to allow floating vegetation to pass out. Also to see that the connecting openings are large. (9) To gradually carry out the suggestions offered under the head of conservancy in the last Inspection Report. (10) To provide a public slaughter-house which is a great desideratum here. (11) To always insist on deep burials as the only means of lessening the chance of contamination of the air. (12) To properly work the Compulsory Vaccination Act during the ensuing vaccination season, and place the town on a state of thorough protection. (13) To fully utilize the Compulsory Registration Act, particularly the penal clauses. (14) To have the persons charged with the duty of reporting all births and deaths punished under section 6 of the Act whenever they omit to give information of these App: V.] lxvi

occurrences. Also to adopt measures generally to place registration on a satisfactory footing,

birth registration receiving particular attention.

Action taken on the suggestions:—(1) The Tamakpati and the Nityeganj roads have been metalled. (2) Pucca drains have been constructed by the sides of Nityeganj, Bhagwanganj, and Sital Lakhya roads. (3) Ranigunge pipes have been purchased, and will be used to connect the ditches and fill them with river water. (4) One additional rubbish cart has been provided. (5) Night-soil is now being buried in shallow trenches.

Nasirabad Town.—Inspected in August 1887.—The sanitary arrangements of this town, though considerably improved of late, were still far from being satisfactory. The drainage was very defective, rendering the greater part of the town quite swampy and water-logged throughout the rainy season, and the water-supply for drinking and other domestic purposes was admittedly insufficient for local requirements. The conservancy arrangements still required much attention, while those relating to disposal of the dead as

far as interments were concerned, were very unsatisfactory. I was, however, glad to see that the Commissioners were taking interest in the sanitary welfare of the place.

The suggestions were:—(1) To try the best to husband the resources of the municipality, and employ as much of the savings as possible for removing existing defects and carrying out permanent sanitary works. (2) To fully utilize section 227 of the Municipal Act, which requires the owners of all improperly drained land within 100 feet of municipal drain or outlet to drain such land. (3) To have the kutcha roads gradually metalled, portions being done every year as funds permit. (4) To have the buildings along the river bank opposite the town partially removed, by taking away a block of three or four houses every 100 yards or so. (5) To gradually provide the town with an efficient system of drainage, 100 yards or so. (5) To gradually provide the town with an efficient system of drainage, one part being done one year and another the next, so that the cost may be distributed over a convenient number of years. (6) To provide two or three puece wells at convenient places every year till the wants of the whole town can be supplied. Also to consider the expediency of having wells made of Ranigunge drain pipes of suitable size. (7) Not to allow jute steeping to be carried on in the river. (8) To gradually carry into effect such of the suggestions made under the head of conservancy in the last two Inspection Reports as have not yet been attended to. (9) To induce those of the inhabitants who can afford the cost of construction to build for the mealway prepar surface priving which could be closed the cost of construction to build for themselves proper surface privies which could be cleaned easily. Also to request the Raja Bahadur to grant permission to his tenants to do this. (10) To address the Government on the subject of proper latrine accommodation for the police who resort to the low land opposite their lines for purposes of nature. (11) To continue to work Part IX of the Municipal Act in spite of agitation against it. (12) Not to lose sight of the recommendations and under the head of markets in the last Inspection (13) To establish a graveyard for the Native Christians. (14) To always insist on burials in lines with fixed intervals between each grave and each row of graves, and see that the *chupper* which is usually placed in the Mahomedan graves is not less than four feet below the surface of the ground. (15) To strictly forbid burials within house enclosures, and require all interments to be made in the public grounds. (16) Not to allow the clothes, pillows, &c., of the deceased to be taken away by the domes, but to have them invariably burnt along with the bodies. (17) To no longer remain indifferent to the insanitary condition of the serais for the Mahomedans, but to take immediate steps to rectify the defects pointed out in the last report. (18) With the aid of the Compulsory Vaccination Act to considerably push on vaccinations during the ensuing season. (19) To give effect to the recommendations made under the head of registration in former reports. Also to induce the midwives to give information of all births which they attend.

Action taken on the suggestions:—Resolutions have been passed adopting several of the suggestions, but it is reported that none of them has been actually carried out, but will be

attended to as early as possible.

Dacca Town.—Inspected in August 1887.—This town was found in much the same state as before; many of the insanitary conditions that had been observed on the last occasion still existed to the detriment of public health. Important measures, deeply affecting sanitation, such as the extension of the filtered water-supply, the provision of an improved system of surface drainage, the opening of passages for sweepers and conservancy carts in places, the construction of a public slaughter-house, the establishment of more trenching grounds for night-soil and burial-grounds for Mahomedans, &c., had been suggested in the last and former reports, but very little seemed to have been done to carry them out. In fact the Commissioners appeared to be in a chronic state of inability to effect much good in the town.

Commissioners appeared to be in a chronic state of inability to effect much good in the town.

The suggestions were:—(1) To seriously consider the question of the diminution of the income, and take steps to prevent its recurrence. (2) To adopt measures to remove the existing defects, and place the town. specially such parts of it as Shakharibazar, Tatibazar, Kaltabazar, Rokonpore, Kasaitooli, Scotrapore, &c. that are notoriously unhealthy, on a proper sanitary footing. (3) Either to raise a loan or sell off a portion of the landed property belonging to the municipality and employ the proceeds in carrying out urgent sanitary reforms. (4). To forward, through the Magistrate of the district, a copy of the expression of my views on the unfortunate difference of opinion on a legal point between the municipal executive and a bench of Honorary Magistrates with regard to a grave sanitary evil, viz. burial in private graveyards, to the Bench for consideration. (5) To see that the Buckland bund is not diverted from its original use and converted into a river bazar. (6) To draw up a complete scheme of drainage for the town and carry it out gradually, parts being done every year. (7)

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To exercise the greatest watchfulness over the arrangements for cleaning out the vats into which house fluids are collected. (8) To keep in view the necessity of enlarging the bridges over the khals that pass through the town, as also their replacement by girder bridges. Also to deal with the evil of so many privies emptying direct into the khals. (9) To at once take up the question of the filtered water-supply, and have the necessary outlay sanctioned. (10) To see that the stand pipes are kept in good order to prevent water going to waste. (11) To insist in the filling up with earth from the river chur all filthy tanks and wells situated in quarters supplied with filtered water. (12) To give effect to the suggestions offered under the head of conservancy in the last Inspection Report, and make more than ordinary efforts to ensure the efficient discharge of the various duties comprised in this important branch of sanitation. (13) To try to the utmost to push on the work in connection with the acquirements of space for a cartway and mether's passage to the gor situated in Lal Chand Mokim's lane, and to other gors as well. (14) To compel the proprietor of the market at Sootrapore to put it into such a state as to be suitable for the sale of food, and in case of non-compliance, cancel the license for the market. (15) To introduce Part X of the Municipal Act, and fully utilize its provisions to improve the conditions of the private markets. (16) To construct a proper slaughter-house as has been repeatedly urged in former Inspection Reports. (17) To take immediate steps to put a stop to the objectionable practice of burying the dead in some of the old closed Mahomedan graveyards. (18) Not to allow the chupper in the Mahomedan graves to be placed only 18 inches, instead of at least four feet below the surface of the ground. (19) To organize measures for carrying on vaccination on an extended scale, so that the place may be thoroughly protected from small-pox. (20) To adopt measures generally, as recommended on previo

mended on previous occasions, to place registration on a satisfactory footing.

Action taken on the suggestions.—(1) Fifty up-country men and women have been added to the conservancy establishment. (2) The public latrines are now being properly looked after by a Portuguese Inspector. (3) About 5,800 private latrines are being cleaned every other day by municipal methers. (4) Of the gors four have been and six are being filled up.

Motihari Town.—Inspected in August 1887.—I was very glad to find that the sanitation of the town continued to engage the attention of the Commissioners. Some improvements had been effected since the town was last visited, but much more still remained to be done. The drainage and the conservancy arrangements were very defective and required to be largely improved. The water-supply question too demanded serious attention. In fact the unfortunate liability of this town to severe outbreaks of cholera was seen to depend in a great measure upon the defective arrangements as to water-supply and night-soil femoval.

a great measure upon the defective arrangements as to water-supply and night-soil femoval.

The suggestions were:—(1) To devote year after year a fair share of the income for the purpose of removing local insanitary conditions. (2) To devise some means for increasing the municipal revenue, so that more money might be available for carrying out sanitary reforms. (3) To make persevering endeavours to effectively deal with all pits and water-holes in the manner suggested in the previous Inspection Report. (4) With reference to the pucca drain on the east side of the zemindari market to take the opinion of an Engineer if the level of it has been properly laid. (5) To see that the drains are not encroached upon, and the flow of water impeded in front of houses and shops, and take stringent measures to deal with these obstructions. (6) To gradually give effect to the recommendations made under the head of drainage in the last report. (7) To provide some more pucca ghâts in the new tank near the serat, to prevent its banks being destroyed. (8) To have rubbish near the wells removed as soon as discovered. (9) To supply every public well with a metal bucket and enjoin its use. (10) To gradually carry out the suggestions offered under the head of conservancy in the last report. (11) To have the conservancy establishment strictly supervised, the work of each man being defined, and that work taken from him in full. (12) To require the people to bring out all house rubbish at the appointed hour and deposit it on the roadside for removal by the conservancy earts, the existing accumulations in and around the houses being advantageously disposed of at the cost of the offenders. (13) To take early steps to introduce Part IX of the Municipal Act. (14) To carry on the trenching system in the manner recommended on the last the soil. (15) To have the mat huts in the municipal market properly arranged in rows with ample space between, and covered with non-inflammable materials. Also to see that the shops in the zemindar's market are

Bettiah Town.—Inspected in September 1887.—I inspected the town in company with the Sub-divisional Officer Mr. Bright, and saw nearly the whole of it. I was glad to find that some improvements had been effected since last visit; the chief among them being the metalling of roads, the extension of pucca saucer-thaped sidedrains, and the construction of spill drains, and platforms around several wells. It appeared that the Commissioners were trying to improve the sanitation of the place. There were, however, still many grave defects, particularly under the heads of drainage, water-supply and conservancy, which required attention.

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The suggestions were:—(1) To do the best to reduce as much as possible the expenses under the head of "maintenance of hospitals, &c." (2) To continue to devote year after year a fair proportion of the income to rectify the grave defects that yet exist and carry out permanent sanitary works. (3) To show greater activity in the administration of the sanitary clauses of the Municipal Act. (4) To take steps generally to improve the condition of the houses of the people, and give effect to the suggestions offered on the subject in the last report. (5) To gradually carry out a good scheme of drainage. (6) To see if something can be done to connect the various water-holes in the most round the Rajbari by an open channel, so that every heavy fall of rain would flush them to some extent. (7) To keep the pucce sidedrains in good repair. (8) To have the existing wells enclosed by masonry rims, and to provide masonry platforms round their mouths, and drains to carry off spill water. Also to clean them out frequently and keep the town surface scrupulously clean from night-soil, cow-dung, or decaying rubbish of any kind. (9) To sink one or two deep wells at convenient places, using Ranigunge drain pipes of suitable size, have the mouths protected in the manner indicated above, and observe the quality of the water obtained. Also to consider the expediency of experimenting with one of Norton's tube wells, unless Engineers have already found it unsuited to the district. (10) To gradually carry into effect the suggestions made under the head of conservancy in the last Inspection Report. (11) To introduce Part IX of the Municipal Act and have all night-soil daily removed from the town. (12) To construct a slaughter-house on a small scale as recommended in the last report. (13) To see that bodies are buried in regular lines with fixed spaces between each grave and each row of graves. (14) To fully utilize the provisions of the Compulsory Vaccination Act, and push on vaccination during the present season. (15) To have all the child

(16) If one vaccinator is not sufficient for the purpose, to appoint another temporarily.

**Action taken on the suggestions:—It was resolved to provide for expenditure on the

following heads in the next year's budget estimates:-

	•			Rs.
Erection of a slaughter-ho	uso	•••		175
Ditto two latrines		•••		200
Ditto two urinals	•••	•••	• • •	40
Two rubbish carts	•••		•••	100
	•••		•••	30
	•••	•••		288
	***	•••		96
Cleaning roadsides	•••	•••	• • •	100
Repairing existing drains	•••	•••	•••	600
· Spill drains to wells	•••	•••	•••	600
Cleaning wells	,, , • ;•			300
Surveying the town and to	king levels	•••	•••	160
Feeding two extra bullock	s	•••	•••	54
				2,743
	Ditto two latrines Ditto two urinals Two rubbish carts Four wheel-barrows Six street-sweepers Two latrine sweepers Cleaning roadsides Repairing existing drains Spill drains to wells Cleaning wells Surveying the town and ta	Ditto two latrines Ditto two urinals Two rubbish carts Four wheel-barrows Six street-sweepers Two latrine sweepers Cleaning roadsides Repairing existing drains Spill drains to wells Cloaning wells Surveying the town and taking levels	Ditto two latrines Ditto two urinals Two rubbish carts Four wheel-barrows Six street-sweepers Two latrine sweepers Cleaning roadsides Repairing existing drains Spill drains to wells Cleaning wells Surveying the town and taking levels	Ditto two latrines

Rungpore Town.—Inspected in September 1887—The sanitary condition of this town was seen to have somewhat improved since last inspection, but was still very far from being satisfactory. There were many grave defects, particularly under the heads of drainage and conservancy, which seriously affected health. Jungle too was as rampant as ever and by preventing free perflation of air and drying up of the surface added much to the insalubrity of the place which though no longer so highly malarious as before was still, and I fear is even now, one of the most unhealthy towns in Lower Bengal. Great attention on the part of the Commissioners was required to be paid to put Rungpore on

a proper saintary footing.

The suggestions were:—(1) To husband the resources of the municipality as much as possible, and do the best to remove existing defects and carry out well planned sanitary reforms which will permanently benefit health. (2) To display greater activity in the administration of the sanitary clauses of the Municipal Act. (3) To keep the sides of the roads and drains free from jungle. and see that the people do their part of the duty with respect to all lands owned or occupied by them. Also to encourage in the latter case, cultivation of the land as gardens as being the best method of destroying jungle. (4) To have the series of tanks towards the south side of Mahiganj connected by a channel with one another and with the drainage system. (5). To make sustained endeavours to gradually extend the system of puces sidedrains, this being in the first instance done in the crowded localities and along all the principal streets. (6) Wherever the drains are made pucea to see that all housedrains have pucea connections with them. (7) To gradually give effect to as many as possible of the suggestions offered under the head of drainage in the Annual Report of the Civil Surgeon for the year 1886 an extract from which embodying his recommendations was sent to the Chairman for consideration under this office cover No. 1771RA of 3rd March last. (8) To provide the wells that are used solely for drinking purposes with buckets and chains with pulleys for raising water as early as possible. (9) To take

possession of the old wells in Mahiganj thatsare in a bad state, if no longer claimed by their owners, and put them into proper order and preserve as municipal property. If claimed by persons now living, to serve notice upon them to put the wells in proper order. (10) To consider the great advantage of introducing and encouraging the use of Ranigunge drain pipes of suitable sizes in place of the ordinary earthen well rings. (11) To gradually give effect to the suggestions offered under the head of conservancy in the last Inspection Report. (12) To make arrangements for the regular removal of all rubbish, &c from the Dhap bazar, and properly attend to the work in connection with the filling up of the foul pit behind this place. (13) To seriously consider the subject of the shop-keepers throwing out ihamps beyond the proper road alignment to protect their shops from the sun, and take steps to remedy, the defect. (14) To construct a proper slaughter-house on a small scale as recommended in previous reports. (15) To see that bodies are buried deeply, there being at least four feet of earth over the chapper which is usually placed in Mahomedan graves. (16) To have the clothes, mats, &c. of the Hindu dead always destroyed by fire. (17) To fully utilize the provisions of the Compulsory Vaccination Act, particularly its penal clauses, and have all the children born during the year, and a certain number of the older inhabitants who are still unprotected, vaccinated. Also to make arrangements for carrying on vaccination during the present season on an adequate scale. (18) To give effect to the recommendations made under the head of registration in the last report, and adopt measures generally for obtaining accuracy in registration. (19) To induce the midwives to give information of all births at which they attend, giving them, if necessary, a small fee for doing so.

Dinajpur Town.—Inspected in September 1887.—This town was found in a somewhat better state than formerly. Some improvements were seen to have been effected since last inspection, and it was evident that the Commissioners were taking interest in the sanitary welfare of the place. It afforded me great pleasure to see that work had been commenced in connection with the long contemplated drainage scheme which when accomplished will vastly improve sanitation. There were, however, still many serious defects, notably under the heads of water-supply and conservancy, calling for early rectification. The nuisance of foul nits and water-holes too continued unabated to the great detriment of public health

vastly improve sanitation. There were, however, still many serious defects, notably under the heads of water-supply and conservancy, calling for early rectification. The nuisance of foul pits and water-holes; too, continued unabated to the great detriment of public health.

The suggestions were:—(1) To continue to devote annually a fair and equitable portion of the income for removing the existing sanitary defects and carrying out other sanitary reforms that are calculated to improve local sanitation. (2) To supply a few more culverts that are required on some of the roads. (3) To have all depressions, holes, old tanks and dobus as far as possible connected with one another and with the principal drainage outlets, and to fill up with sand from the bed of the river Puranabhava such of them as will not completely drain out, some money being yearly devoted to this purpose. (4) To consider the desirableness of having one or two of the hollows in central position dug out into serviceable tanks, the spare earth being employed in filling up neighbouring holes and ditches. Also to gradually give effect to the suggestions offered under the head of pits and hollows in previous reports. (5) After the drainage scheme is carried out not to stop short here, but do previous reports. (5) After the drainage scheme is carried out not to stop short here, but do the best to provide piece by piece as funds become available, pucca shallow saucer-shaped drains along the principal streets and in the crowded localities. (6) Wherever pucca drains are provided to see that all house-drains have pucca connections with them. (7) To properly drain the Gograh nullah which was full of foul water that smelt badly. (8) To deal with all foul tanks in the manner suggested before. (9) To induce the rich owners of some of the all foul tanks in the manner suggested before. (9) To induce the rich owners of some of the other tanks to have them re-dug, properly protected from pollution, and reserved for drinking. Also to consider the advisibility of annually contributing small sums to the owners of one or two of the dobas to enable them to treat these similarly. (10) To provide the municipal and the other wells that are used solely for drinking with pucca platforms around their mouths, surrounded by shallow saucer-drains which should have connection with another draineto carry off spill water to a good distance from the wells. (11) To prohibit the dipping of private vessels into the municipal wells at least, and supply the wells with buckets and chains with pulleys for rising water. (12) In future to have the wells sunk deep in order that a perennial supply of water may be obtained from them. (13) To construct a certain number of good, well-protected pucca wells at convenient places, one or order that a perennial supply of water may be obtained from them. (13) To construct a certain number of good, well-protected pucca wells at convenient places, one or two of these being done every year. Also to use with advantage Ranigunge drain pipes of suitable size in place of the ordinary earthen well rings, the former being quite impervious and more durable. (14) To gradually give effect to the recommendations made under the head of conservancy in the last report. (15) To introduce Part X of the Municipal Act, and with its aid try to improve the condition of the private markets. (16) To establish public burial grounds for Mahomedans as early as possible, and after these are provided not to permit bodies to be buried in them at random, but in the systematic way are provided not to permit bodies to be buried in them at random, but in the systematic way suggested in previous Inspection Reports. (17) To discourage by all means the practice of burying the dead within house enclosures. (18) To see that the clothes, mats, &c., of the deceased are properly disposed of, and not simply thrown away. (19) With the help of the Compulsory Vaccination Act to push on vaccination during the present cold season, and to have not only all the children born during the year, but a fair proportion of those who are still unprotected, vaccinated. (20) Te require the Bakshi, the Overseer and the tax sirpars to pay greater attention to birth and death statistics. Also to give effect to the suggestions offered under the head of registration in former reports, and adopt measures generally to secure accuracy in registration. (21) To induce the midwives to give information of all births which they attend. births which they attend.

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Julpaiguri Town.—Inspected in September 1887.—This town was seen to have considerably improved since last visit, especially so as regards conservancy. The public latrines were coming more into use and promiscuous defocation was diminishing. The introduction of Part IX was apparently proving a boon to the people. The roads were in better condition. In fact it was evident that the Commissioners were anxious to gradually improve local sanitation. There were, however, still many serious sanitary defects, particularly under

the heads of drainage and water-supply, which call for early rectification.

The suggestions were:—(i) To allot year after year a fair and equitable portion of the income for the purpose of carrying out sanitary works that are calculated to permanently benefit health. (2) To administes the sanitary values of the Municipal Act and the byelaws with greater activity and bloseness than at present. (3) Not to permit the roads to be encroached upon by extension of buildings and by fencings, and to always deal with the offenders according to the provisions of the law. (4) To fully utilize street-sweepings and the solid refuse from houses to fill up filthy excevations and water-holes when they are at a the solid refuse from houses to fill up filthy excavations and water-holes when they are at a distance from dwellings, care being, however, taken to limit the operation to a few at a time.

(5) To consider the desirability of annually setting apart a small portion of the income for (5) To consider the desirability of annually setting apart a small portion of the filling in one or two of the worst holes with sand from the river Teesta. (6) To have the town regularly surveyed, and a complete series of levels taken, so that a drainage scheme may be prepared, and after it is done to undertake it piece by piece and carry it out gradually till the project is accomplished, some progress being, however, made every year. (7) To take steps to gradually improve the condition of the house drains. (8) To keep down jungle on the inner slope of the tank near the Rajbari which affords good drinking water. (9) To do the inner slope of the tank near the Rajbari which affords good drinking water. (9) To do something towards providing wells of a better character, a few good pot ring ones being dug in suitable localities or more permanent ones sunk with Ranigunge drain pipes of large size. (10) To instruct the people to raise the mouths of their kutcha wells by a couple of pot rings supported by bamboo matting. (11) To gradually give effect to such of the suggestions offered under the head of conservancy in the last Inspection Report as have flot yet been attended to. (12) To require the inhabitants to bring out all house-rubbish at the appointed hour and deposit it on the roadside for removal by the conservancy carts, the existing accumulations in and around the houses being removed at the cost of the offenders and utilized in filling up foul pits and excavations. (13) With the aid of Part X of the Municipal Act, which has been recently introduced here to put the private market into proper order. (14) To provide a proper slaughtering place as recommended in previous reports. (15) To fully carry out the provisions of the Compulsory Vaccination Act, and show considerable activity in protecting the town. (16) To have all the children born during the year as well as a certain number of the older inhabitants who are still unprotected, vaccinated. (17) To no longer allow the Compulsory Registration Act to remain a dead letter, and to carry into effect as early as possible the suggestions made under this a dead letter, and to carry into effect as early as possible the suggestions made under this head in former Inspection Reports. (18) To require the tax-collectors to report all deaths as a check on voluntary registration. (19) To take early steps to introduce the system of birth registration.

Action taken on the suggestions:—Resolutions have been passed adopting several of the recommendations. It was reported that they will be carried out gradually as funds become

available.

Durbhanga Town.—Inspected in November 1887.—This town appeared to be growing in importance since the advent of the railway, but its sanitary condition was much the same as before. Some improvemen's were seen to have been effected since last visit, but they were quite inadequate to the wants of the place. It was studded with holes and vast excavations containing rotting-water, and the arrangements under the heads of drainage, watersupply and conservancy were far from being satisfactory. In fact, I was disappointed to return after nearly two years to see that little had been done to materially improve its It seemed that what was really wanted was life in the administration of the sanitation.

municipality.

The suggestions were:—(1) To make every effort towards sanitary improvement, and disburse the revenue in such a way as to secure the greatest good for the greatest number. (2) To administer the sanitary clauses of the Municipal Act and the bye-laws with the activity and closeness that could be desired. (3) To perseveringly carry out the suggestions offered in the last report with respect to the treatment of foul pits and hollows. (4) To spare no pains to bring the contemplated drainage scheme to a speedy termination. Also not to lose sight of the suggestions made under this head in the last report but to attend to them as opportunity arises. (5) To fully utilize section 224 of the Municipal Act, which requires house-holders to repair and make efficient or remove drains, &c., and to encourage by all means the use of half Ranigunge pipes for the purpose of house-drains. (6) To supply the municipal wells with metal buckets and chains with pulleys for drawing water. (7) To require the municipal overseers to regularly inspect the wells, and have rubbish which has fallen in removed. (8) To consider the desirability of having the town wells de-watered every second year and thoroughly cleaned out. (9) To gradually, but perseveringly carry out such of the recommendations made under the head of conservancy in the last Inspection Report as have not yet here attended to or if et all only imperfectly. Report as have not yet been attended to, or if at all only imperfectly, and adopt measures for the prompt and proper removal beyond town limits and the effectual disposal of rubbish, sewage, night soil and other offensive matters. (10) To provide a proper surface privy near the municipal market, and to request the Maharaja to do the same near the market belonging to him. (11) To establish at some convenient place a proper slaughter-house lxxi App. V.

in such a way as to suit the purpose for which it is intended. (13) To close all private burial-grounds within the town and select leads of the close all private burial-grounds. burial-grounds within the town, and select lands of a suitable character outside town limits, and make them over to the Mahomedan community on the understanding that interments are made in a proper manner both as to depth and arrangements of graves. (14) To actively push on vaccine operations during the present season, and place the town on a state of thorough protection. (15) To properly carry out the suggestions offered under the head of registration in the previous report, and take an active interest in the matter and try to obtain correct statistics.

Mozufferpore Town.—Inspected in November 1887.—The state of this town was found to be almost as bad as before, nothing but roads being attended to. Drainage and water-supply were left to take care of themselves, while large municipal and conservancy establishments were kept up, from whom a minimum of labour was exacted. Indeed, it seemed doubtful if many of the men said to be employed used to do more than appear to take their pay. The town is a filthy undrained one, a standing discredit to municipal administration. Evidently the Commissioners were quite apathetic to the sanitary welfare of the place and seemed almost to be bringing themselves within the action contemplated in section 65 of the

Municipal Act.

The suggestions were:—(1) To accord serious consideration to the suggestions offered under the several branches of sanitation in the present as well as in the previous report, and take adequate steps to materially improve local sanitation. (2) To give effect to the recommendations made under the head of "operation of the municipal laws" in the last report, and satisfactorily administer the sanitary clauses of the Municipal Act. (3) To consider the desirability of framing and bringing into operation a bye-law prescribing a penalty for non-compliance with a requisition made under section 206 of the above-named Act. (4) To perseveringly deal with the unremoved encroachments upon roads according to the provisions of the law. (5) To treat all pits and hollows in the manner recommended on the previous occasion. (6) To attend at proper season and with proper care to the pruning of the young trees planted along the station roads. (7) To do the best to promote and undertake a proper scheme of drainage as early as possible, and carry it out in parts as funds permit, some progress being, however, made every year. (8) To fully exercise the powers conferred by law and prevent the drains being encroached upon. (9) To carry out the suggestions made under the head of water-supply in the last Inspection Report. (10) To reconsider the decision arrived at on the subject of the water-supply scheme, sift the whole thing carefully, To accord serious consideration to the suggestions offered The suggestions were:—(1) decision arrived at on the subject of the water-supply scheme, sift the whole thing carefully, see how much of the estimated amount can be raised by subscription, and ascertain whether the levy of a water-rate will really be a hardship to the people and to what proportion of them. (11) To adopt measures for the prompt and proper removal beyond town limits and the effectual disposal of rubbish, sewage, night-soil, and other offensive matters. (12) To have the floors and the drains of municipal markets gradually made pucca. (13) To introduce Part X of the Municipal Act, have the private markets licensed, and insist on their owners maintaining them in proper order. (14) To take action under section 250 of the Act, and prevent the sale of unwholesome food and drink. (15) To remove without further delay the prevent the sale of unwholesome food and drink. (15) To remove without further delay the defects pointed out under the head of disposal of the dead. (16) To take immediate steps to push on vaccine operations, and properly administer the provisions of the Compulsory Vaccination Act. (17) To give effect to the recommendations made under the head of "registration" in the last Inspection Report. Also to require the Registrar specially appointed for the purpose to go round the several wards alternately, and try to detect and report for punishment all evaders of the law.

Chupra Town.—Inspected in November 1887—The sanitary arrangements of this town were seen to be somewhat better than formerly. Greater attention was being paid to general cleaning, and steps had been taken for carrying out a proper drainage scheme. I was also glad to find that two slaughter-houses had been constructed, and 17 moveable iron latrines provided since last inspection. In fact, it was evident that the Commissioners were interesting themselves in ameliorating the condition of the place. There were, however, yet many defects

themselves in ameliorating the condition of the place. There were, however, yet many defects particularly under the heads of water-supply and disposal of the dead, which injuriously affected health. The conservancy, too was still capable of much improvement.

The suggestions were:—(1) To continue to allot year after year a fair proportion of the income to rectify the defects under the several heads of sanitation, and place all parts of the town on a proper sanitary footing. (2) To gradually metal a certain length of the kutcha roads every year, and construct a good pucca one through mohullah Ratanpore, which is densely populated and very unhealthy. (3) To use street-sweepings, &c., in filling up pits densely populated and very unhealthy. (3) To use street-sweepings, &c., in filling up pits and water-heles, but only when they are at a distance from the dwelling-places, otherwise to have them filled up with earth and sand from the bed of the nullah close by. apart annually a small portion of the income for this purpose. (4) To strictly enforce section 232 of the Municipal Act, and prevent the making of further excavations at random. To strictly enforce (5) To do the best to devote every year as much money as possible for quickly carrying out the contemplated drainage scheme. (6) To build no more pucca side drains at present till a scheme has been prepared for the whole town, as the levels might be wrong and the work might require to be done over again. (7). To give effect to the suggestions made under this head in the last Inspection Report as opportunity arises. (8) To consider the desirability of treating as reserved one or two additional tanks, and setting them apart for drinking only. (9) To improve the condition of the wells, the chief source of local water-supply, and provide the troughs in which spill water is collected for use by animals with a hole to let the water out occasionally Also to set apart a sufficient number of wells for drinking and other domestic purposes,

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thoroughly protect them from pollution, supply them each with an iron bucket and chain on a pulley or attached to a counter-weighted lifter, and strictly prohibit the dipping of private vessels into them. (10) To gradually give effect to such of the recommendations made under the head of conservancy in the last Inspection Report, as have not yet been attended to. (11) To see that the requisitions made to improve the condition of the private markets to. (11) To see that the requisitions made to improve the condition of the private markets are duly complied with. Also to gradually carry out the suggestions offered under the head of markets and slaughter-houses in the previous report. (12) To by-and-by effect the improvements suggested under the head of disposal of the dead on the last occasion. (13) With the aid of the Compulsory Vaccination Act, to carry on operations this season on a much more extended scale than formerly. (14) To have all the children born during the year, as well as a fair proportion of the older inhabitants who are still unprotected, vaccinated. (15) To require the tax-collectors to pay greater attention to vital statistics. Also to adopt measures generally as suggested in the last report to secure accuracy in registration.

Patna City Municipality.—Inspected in November 1887.—There had been very little advance in the sanitary condition of this town since last visit. True, some improvements were found to have been carried out, but they were very few and not at all commensurate with local wants. Many of the defects that were observed on the last occasion still existed to the detriment of public health. In fact, the arrangements under the various heads of sanitation were almost as bad and unsatisfactory as when last seen, and this appeared to be mainly due to the faulty organisation of the Ward Committee system here which instead of being a help to the municipal executive was readed in the remaining of the system. promote sanitation, Urgent reforms were needed in the executive administration of the

municipality.

The suggestions were:—(1) To do the best to curtail the expenses under the head of "construction, improvement, &c., of roads." (2) To see whether the large staff of peons in both the municipal and the conservancy establishments are really employed or not, and how 68 bullockmen are required and only 12 carters. (3) To have the Ward Committee system either properly conducted and controlled or abolished. (4) To devote year after year a much larger proportion than only 3.6 per cent. of the income to supply the wants of the place and carry out permanent sanitary improvements. (5) To satisfactorily administer the municipal law and the bye-laws. (6) To strictly enforce sections 202 and 204 of the Municipal Act, and prevent the roads being encroached upon in future. (7) To provide the lanes which have no sidedrains with central pucca channels which could be very well made of flat Ranigunge tiles. (8) To fully utilize section 232 of the Act, and either prohibit or properly control the making of excavations for taking earth, &c. (9) To allot annually a small portion of the municipal revenue to fill up one or two of the worst holes with mud, and sand from the deara of the river. (10) To see that central drainage channels are made of brick-on-edge and cemented. (11) To make more than ordinary efforts to gradually carry out a regular drainage scheme, one section being done one year and another section the next year as funds permit. (12) To gradually extend the system of pucca drainage to the crowded localities. (13) To always allow the house-drains to empty themselves to the crowded localities. (13) To always allow the house-drains to empty themselves into the public ones, and see that wherever pucca drains are provided the former have pucca connections with them. (14) To close the wells that were condemned by the Chemical Examiner as unwholesome and open out good ones in proper places. (15) Todo the best to suppress the abominable well-privies which seriously contaminate the well water. (16) To pay the most careful attention to the question of the improvement of the local water-supply. (17) To move the Magista to take up the question of proper privy arrangements for the police and no longer put it off by attempting to transfer the responsibility from the shoulders of the police to that of the Commissioners. (18) To gradually but perseveringly carry out the suggestions made under the head of conservancy in the last eport, and take adequate steps for the prompt and proper removal beyond town limits and effectual disposal of rubbish, sewage, night-soil and other offensive matters. (19) To require the owners of adequate steps for the prompt and proper removal beyond town limits and effectual disposal of rubbish, sewage, night-soil and other offensive matters. (19) To require the owners of the private markets to provide these places with either tiled or corrugated iron-sheds, and improve their general condition gradually. (20) Not to lose sight of the suggestion made in the last report regarding the construction of a properly appointed market. (21) To apply to Government to extend to the town the provisions of Act VII (B.C.) of 1865, the Slaughter-bouse Act. (22) To no longer tolerate the present objectionable state of things in correction with interments but to make every endeavour to give effect to the recommendain connection with interments, but to make every endeavour to give effect to the recommendations made on the subject in the last Inspection Report. (23) To at once stop the practice of throwing uncremated or partially cremated bodies, as well as the pauper dead, into the river, and see that the bodies are always properly disposed of. (24) To fully utilize the provisions of the Compulsory Vaccination Act, and place the town on a state of thorough provisions of the compaisory vaccination and, and place the town on a state of the following protection by vaccinating every season all the children born during the year, as well as a fair proportion of the other inhabitants who are still unprotected. (25) To properly enforce the provisions of the Compulsory Registration Act, particularly its penal clauses. (26) To require the tax-collectors to report all births and deaths as a check over voluntary registration and the reports of the municipal jemadars, all omissions thus brought to light being dealt with according to law. (27) To induce the midwives to give information of all births which they attend, remunerating them, if necessary, by a small fee for doing so.

Arrah Town, -Inspected in November 1887. -Accompanying by the Vice-Chairman and for a time by the Civil Surgeon, I went over the town and saw its various parts. It was in much the same condition as before as to drainage, water-supply and general conservancy, but there were evidences to show that some interest was being taken in its sanitary affairs. The following were the chief improvements noticed to have been carried out since last visit:— lxxiii

Some of the kutcha roads had been metalled; steps had been taken for pushing on the construction of pucca drains; four public latrines for males and five for females had been provided at convenient places; and land had been acquired for the construction of a slaughter-house at Rouza in place of the one at Anayeth. Much, however, still remained to be done to place the

town on a proper sanitary footing.

The suggestions were: —(1) To carefully avoid mistakes and omissions in filling up the Inspection Memorandum Book. (2) To try the best to husband the resources of the municipality and employ as much of the savings as possible to remove existing defects and carry out sanitary reforms which will permanently benefit health. (3) To show greater activity in the administration of the sanitary clauses of the Municipal Act. (4) To early consider the question of bunding in the tank in the village of Nowada, and filling it with canal water, and carrying the drainage of the locality elsewhere. Also to have the village efficiently surface drained, and to construct a good pucca road through it, care being taken to open up surface drained, and to construct a good pucca road through it, care being taken to open up the crowded parts, and proceeding with both the works gradually, a portion of each being done every year (5) To devote as much money as possible to carry out within a few years the contemplated drainage scheme. (6) To see if the several sheets of water above and below a large pucca bridge not far from the old bed of the Ganges could be drained into it. (7) To have the branches of the banian tree overhanging the well lately repaired by the municipality lopped off. (8) To provide the other wells each with a chain pump and two reservoirs with taps, one for Hindus and the other for Mahomedans, and prohibit the dipping of private vessels into them. (9) To surround the masonry platforms round the mouths of the wells that are used for drinking by a pucca shallow saucer-shaped drain which should have connection with another drain to carry of the spill water to a safe distance from should have connection with another drain to carry of the spill water to a safe distance from should have connection with another drain to carry of the spill water to a safe distance from the well. (10) To prevail upon private persons to improve their wells, and in cases where they are undoubtedly bad, close them. Also to pay the strictest attention to such things as their proximity to well-privies and bad drains, and defects in repair and construction. (11) To provide the public latrines with proper receptacles for urine and washings. (12) To take up for trenching purposes another piece of land on the opposite side of the town towards the river. (13) To carry out further improvements in the conservancy arrangements here, in the shape of more public latrines and trinals, barrel carts for the removal of fluid house and kitchen refuse measures for the regular cleaning of the private latrines, the suppression and kitchen refuse, measures for the regular cleaning of the private latrines, the suppression of the well-privies, &c. (14) To gradually attend to the suggestions made in the previous report for improving the condition of the market. (15) To take early steps to close the graveyards inside the town for reasons explained in the last report, and to provide one or two public ones in their stead at the outskirts of the municipality. (16) To make every endeavour to remove the local insanitary conditions which engender chelera and intensify its severity. (17) To provide a room at each vaccination depôt for the accommodation of persons to be operated on, and have this made known to the public by a notice in the vernacular. (18) To dispense with the services of the new vaccinator unless he can discharge his duties satisfactorily. (19) To fully carry out the provisions of the Compulsory Vaccination Act, and place the town in a state of thorough protection. (20) To fully and perseveringly carry out the suggestions offered under the head of registration in the last report, and make every endeavour to secure accuracy in registration.

Gya town.—Inspected in November 1887.—Very few improvements were seen to have been effected since the town was last visited. The drainage and the water-supply arrangements were as defective and unsatisfactory as ever, and conservancy work continued to be very inefficiently performed. In fact Gya was much in the same condition as when last seen, but the Vice-Chairman told me that the state of embarrassment from debt was being gradually got rid of after which he hoped to make some advancement. Well planued sanitary reforms were urgently wanted to place the town on a proper sanitary footing.

The suggestions were:—(1) As soon as the finances of the municipality are in a better state to do away with the present unsatisfactory state of things, and take steps generally to improve lead senitation.

improve local sanitation. (2) To fully utilize the bye-laws that have been recently framed after they come into force. (3) To pay immediate attention to the suggestion offered in the last report, to keep the side drains clean and in an efficient state. (4) To make some attempt to flush at regular intervals the large square underground masonry drains in the old town, as also the Kajapi pyne. (5) To encourage the use of Ranigunge drain pipes properly cemented at the joints for purposes of house connections, and have all water and fluids from houses, and specially from the lodging-houses conducted through the premises in half drain pipes of suitable size, and see that all such drains are kept open to permit of constant cleansing. (6) To give effect to the recommendations made under the head of drainage in the last report, and do the best to promote and undertake as early as possible a proper scheme of drainage based on a correct survey of the town. (8) To construct masonry platforms around the mouths of the wells resorted to for drinking, and surround the former by a shallow saucershaped drain having connection with another drain to carry off the spill water to the nearest public drain where possible or to a safe distance from the wells. (9) To provide wooden gratings to serve as a cover for the well mouths, and also iron buckets and chains for raising water, the indiscriminate dipping of vessels into them being prohibited. (10) To take up in earnest and without delay the question of providing the town, with filtered water-supply, and do all to accomplish such a laudable project in the manner suggested. (11) To move the Magistrate to take such action in the matter of the non-attendance of the Bench Magistrates as it may appear to him to be called for. (12) To see that the cow and the cattle theds are always kept in proper order. (13) To see that the methers who are employed at public latrines have their families with them, and to employ the methranies on the female

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portion of the buildings. (14) To have the urinals properly washed, and the contents of their reservoirs removed as often as necessary. (15) To encourage as much as possible the sale of night-soil to cultivators for manuring purposes, and make every endeavour to get rid of all in this way. (16) To gradually give effect to the suggestions offered under the head of conservancy in the last report, and make proper arrangements for the efficient carrying out of the multifarious duties of this important branch of sanitation. (17) To take steps to gradually improve the general condition of the private markets, particularly that of the one called ally improve the general condition of the private markets, particularly that of the one called the new godown. Also to require their owners to provide proper urinals and surface privies for the use of the people frequenting these places. (18) To take steps to prevent the sale of unwholesome food and drink. (19) To lose no further time in providing public burial grounds for Mahomedans. (20) To provide at convenient places two, or more if required, pucca enclosures within which cremation should be performed, and prohibit its being done at random on the dry bed of the river Phalgu. Also to erect a shed in er near each of the enclosures to shelter from the weather persons bringing bodies for cremation. (21) To at once stop the objectionable practice of throwing the pauper-dead on the other side of the river, and have the bodies invariably buried or burned at the cost of the municipality at other places than the bed of the river. (22) To carry out the recommendations made under the head of lodging-houses in the previous report, and adopt measures generally to mitigate the sufferings of the pilgrims while residing here. (23) To have vaccination notices stuck up at the depots, and provide proper room accommodation for the vaccinator's books. (24) To the depôts, and provide proper room accommodation for the vaccinator's books. (24) To have all the children born during the year, and a fair proportion of the older inhabitants who are still unprotected, vaccinated each season. (25) To provide more registering stations at central positions. (26) To require the overseers and the tax-collectors to report all births and deaths as a check over voluntary registration. (27) To induce the midwives to give information of all births which they attend, giving them a small remuneration if necessary

Monghyr town.—Inspected in November 1887.—In company with the Vice-Chairman and the Civil Surgeon. I went round the town of Monghyr and saw its various parts and different places and institutions connected with sanitation. There were evidences to show that the Commissioners were interesting themselves in ameliorating the condition of the place. But many defects seriously affecting health still existed. In fact, much must yet be done before Monghyr can be said to be a well cared for town. With improved drainage and

conservancy, its health status could be very largely improved.

conservancy, its health status could be very largely improved.

The suggestions were:—(1) To devote annually a fair—at any rate a much larger proportion than only 3.98 per cent. of the income to rectify the existing defects and carry out sanitary reforms of a permanent character. (2) To improve the condition of the side-drains. (3) To have the busties in the western part of the town efficiently surface-drained, and one or two good roads constructed through them opening out the crowded localities as far as possible. Also to provide a few protected pucca wells here. (4) To fully give effect to the recommendations made under the head of drainage in the previous report. (5) To carry out the contemplated drainage scheme year by year as funds permit, beginning of course with the main outlets. (6) To have the drains in the crowded localities and along the principal thoroughfares gradually made pucca, and advantageously do away with the present cumbrous, costly and inefficient arrangement of cleaning out the vats in which house water from thoroughfares gradually made pucca, and advantageously do away with the present cumbrous, costly and inefficient arrangement of cleaning out the vats in which house water from baths and kitchens is collected. (7) To gradually carry out the suggestions offered under the head of water supply in the last report. (8) To provide a few more rubbish carts, and see that the conservancy establishment is properly supervised. (9) To give effect to such of the suggestions offered under the head of conservancy in the previous Inspection Report as have not been or only partially been attended to. (10) To consider the desirability of providing a cool shady place for the sale of meat. (11) To supply the slaughter-house with a strong beam on which to sling carcases when being skinned and cut up. (12) To see whether the plot of land further east would not answer well as an extension for the Mahomedan burial ground. (13) Not to lose sight of the recommendations made in the last report about the erection of a shelter shed for persons bringing bodies for cremation, and the appointment of a contractor to supply wood at the ghât at fixed prices. (14) To fully and the appointment of a contractor to supply wood at the ghat at fixed prices. (14) To fully and properly carry out the suggestions offered under the head of registration in the last report, particularly that about requiring the municipal servants, such as tax collectors, overseers, &c., to report births and deaths as a check on the police report and voluntary registration.

Action taken on the suggestions: - It was resolved. (1) To make arrangements for sweeping the drains daily. (2) To raise the tops of wells. (3) To carry out the other

suggestions as far as possible.

Jamalpore Town.-Inspected in November 1887.-I inspected the town in company with one of the native Commissioners and the suberdinate staff, both the Chairman and the Vice-Chairman being unable to accompany me. The Vice-Chairman, who was the medical officer of the railway, was so seriously ill at the time that I could not even communicate with him in any way. I was glad to find that the Commissioners continued to manifest much interests in improving the health status of the place. Much had no doubt been effected in this direction, but the arrangements under the several heads of sanitation were still not without defects. Parts of the town, such as Nyagaon and Jehangira, were also in a very insanitary state.

The suggestions were:—(1) To continue to devote year after year a fair, but if possible, a much larger proportion of the income for removing existing defects and carrying out permanent sanitary improvements. (2) Not to lose sight of the recommendations made in the last report for enforcing the sections of Part VI of the Municipal Act bearing on building

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(3) To induce the Railway Company to acquire the portion of the village of Nyagaon which wedges itself in among the houses of the European employés, or at least the section of it abutting on the road, and have the huts thereon demokished and the site levelled and cultivated or advantageously converted into a garden. (4) To provide more iron latrines in the village of Jehangira. (5) To do the best to carry out the suggestions offered under the head of drainage in the previous report. (6) To fully exercise the powers conferred by law, and prevent the drains being so built over as to obstruct the free flow of drainage water or to render them difficult to be cleaned. (7) To seriously consider the desiration of the seriously consider the seriously considered the seriously considered the seriously considered the seriously considered the seriously considered the seriousl ability of distributing by means of suitable pipes the water from the reservoir to the people of the station, particularly throughout the bazar, and all parts in which the Railway employés live. (8) To properly carry out the dry earth system in all public latrines. (9) To give effect to such of the suggestions made under the head of conservancy in the last report as have not yet, or if at all only partially, been attended to, and adopt measures generally for the efficient discharge of the multifarious duties of this branch of sanitation (10) To consider the advisability of raising a loan for the construction of a proper municipal market. (11) To have the bodies as well as the clothes, &c., of the Hindu and Mahomedan paupers dying from small-pox, cholers &c, always burned or buried at the cost of the municipality. (12) To have all the children born during the year, as well as a fair proportion of the older inhabitants who are still unprotected, vaccinated every season.

Bhagulpore Town.—Inspected in November and December 1887.—I inspected this town generally, accompanied by the Vice-Chairman who is a native gentleman, and the Civil Surgeon. It afforded me much pleasure to see that the water-works had been completed and brought into use, and that the scheme was being further developed. The outlay in connection with this was doubtless very heavy, and for the time being prevented the Commissioners from attending to other sanitary wants which are not few. The drainage and the conservancy arrangements, particularly the former, were very defective, and required to be greatly improved. Much, in fact, still remained to be done to place all parts of the town on a satisfactory sanitary footing.

The suggestions were:—(1) To take particular care in correctly filling up the Inspection Memorandum Book, the state of things for the time being being fully and clearly described. (2) After the water-supply scheme is accomplished, to do all to remove the defects that are still to be met with under the several branches of sanitation, and carry out such other works as are calculated to permanently benefit health, it being borne in mind that filtered water alone cannot eliminate the chances of outbreaks of epidemic diseases. (3) To administer the sanitary clauses of the Municipal Act with greater vigor and activity than at present.

(4) As funds permit, to have the back lanes in the Marwari quarter made pucca with brick-on-edge. (5) To see that the sidedrains are not blocked with rubbish. (6) To at once put a stop to the further taking out of earth from the pit behind the over-bridge, and deal with it as well as other pits and hollows in the manner suggested in the last report.

(7) As soon as means are available, to undertake the drainage of Shoojaganj, but first of all to provide a proper outfall drain. (8) To consider the desirability of constructing proper sluice gates at the head of the drainage outfalls to shut out river water when it is in a state of flood. (9) With the general development of the water-supply scheme to get rid of the wells that are imperfectly protected. (10) To provide a few more barrel carts for the removal of refuse water, and see that the conservancy establishment is properly supervised. (11) To consider the expediency of providing proper receptacles on the road side in which house-holders may deposit refuse matter. (12) In constructing latrings in future to aim at nouse-noiders may deposit refuse matter. (12) In constructing latrices in future to aim at iron walls, corrugated iron roof, and a thoroughly paved or cemented basement. (13) To gradually give effect to the recommendations made under the head of conservancy in the last report, and adopt measures generally for the efficient discharge of the several conservancy works. (14) To have the floors of Baboo Gurdhari Sahai's market paved throughouts (15) To supply both the slaughter-houses with beams for slinging carcases. Also to consider the advisability of providing these places with hydrant water. (16) To carry out the recommendations made under the head of disposal of the dead in the previous Inspection Baport immediate effect being given to those that can be attended to almost inexpensively. Report, immediate effect being given to those that can be attended to almost inexpensively. (17) To provide more vaccination depôts at convenient places. (18) To fully utilise, the provisions of the Compulsory Vaccination Act, particularly the penal ones, and place the town in a state of thorough protection. (19) To establish more offices at central places for the registration of births and deaths. (20) To apoint none as Registrar who is not converted. sant with the written and vernacular language of the place where he is employed. (21) To fully and perseveringly carry into effect the suggestions offered under the head of registration in the last report, and take steps generally to obtain as much accuracy in registration as possible.

Sahebganj Town.—Inspected in December 1887.—I went round the town in company with Baboo Hem Chundra Mookerjee, the Vice-Chairman, and found that its sanitary condition had somewhat improved since last inspection. Some of the roads had been metalled with stone and kunker, and a lane opened in Coolipara, and better arrangements made to look after conservancy works. There were, however, still many defects, particularly under the heads of drainage and water-supply, which must be removed before any improvement in the public health can be reasonably hoped for.

The suggestions were:—(1) To continue to devote annually a fair proportion of the income for removing all existing defects and taking steps generally to improve the health status of the place. (2) To show greater activity in the administration of the sanitary clauses of the Municipal Act. (3) To gradually metal the kutcha roads, a certain length being one every year. (4) To fully exercise the powers conferred by law, and prevent

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the making of eneroschments upon roads and drains (5) To have the Dosadpara and Coolipara busties opened up by good roads, and extension over a larger surface than they at present occupy. (6) To lower the water level of the central tank by making a junction with the nullah running on the west. (7) To improve the drainage outlet in the northwest corner of the town. (8) To consider the desirability of having several coolies told off to keep the drains in order, whose sole business this would be Also to see that rubbish, &c., are not swept under door steps and platforms. (9) To gradually carry out the recommendations made under the head of drainage in the last report. (10) To considerably increase the present water-supply by providing more wells at convenient places. (11) If funds permit, to treat the municipal tanks in the manner suggested in the previous report (12). In sinking wells in future, to use Ranigunge drain pipes of suitable size in place of the ordinary earthen well rings. (13) To properly carry on the filling in of the tank which is being done in a crowded neighbourhood, and have some cart loads of earth spread over the sweepings used for the purpose. Also to have the water in the tank baled out before casting in sweepings. (14) To provide a few more carts and bullocks and have the lanes swept at least twice a week. (15) To construct more public latrines in places convenient to the people. (16) To make representation to the Railway Company to provide latrine accommodation near the steamer ghat. (17) To see that the urinals are properly managed and kept clean and ineffensive. (18) To give effect to such of the suggestions offered under the head of conservancy in the last Inspection Report, as have not or only partially been attended to. (19) Not to lose sight of the question of providing a slaughter-house. (20) To act up without further delay to the recommendations made under the head of disposal of the dead in the previous report. (21) To take steps generally to have all the children born during the

Purneah Town—Inspected in December 1887.—I was glad to see that the sanitary condition of this town was a little better than when I inspected in January 1886. Some improvements have been effected, the chief among them being the opening up of the Chandni Chowk busti by constructing three roads through it; the completion of the Lalganj drain at a cost of over Rs. 2.100; and the reconstruction of Sherman's bridge which was carried away by flood, the expense incurred amounting to nearly Rs. 2,500. In fact it was evident that the Commissioners were taking interest in ameliorating the sanitation of the place. Many defects, however, still existed which injuriously affected health and as such called for early rectification.

The suggestions were:—(1) To do all that could be done to prevent the income from falling short again. (2) To continue to devote every year a fair and legitimate proportion of the income to remove the existing defects and to carry out well devised schemes of sanitation calculated to permanently benefit health. (3) To administer the sanitary clauses of the Municipal Act with greater activity. (4) To require the owners of lands in the crowded part of the town to keep them free from jungle, the best method of attaining this object being cultivation of the grounds as gardens. (5) To raise the floor of the culvert under the main street and to have the outlet from it made pueca for about 30 yards. Also to keep the other drains free to act during all wasou. (6) To gradually give effect to the recommendation made in the last report about the provision of pueca shallow saucer-shaped side-drains in the crowded localities, a certain length of the drains being constructed every year as funds permit. (7) To gradually provide all municipal and other wells that are used for drinking with masonry parapets and platforms around their mouths, and to construct a pueca shallow circular drain around the rim of the latter having connection with another drain to carry off spill water. Also to provide the wells with metal buckets and chains with pulleys for raising water and to prohibit the dipping of private vessels into them. (8) To encourage, as much as possible the use of Ranigunge drain pipes in place of the ordinary earthen well rings. (9) To adequately strengthen the present conservancy establishment. (10) To provide tarred gumlahs in the latrine attached to the serai and employ dry earth to keep it tolean and sweet. (11) To strictly enquire whether the private privies are daily cleaned or not, and to ascertain whether the night-soil from them is removed to the trenching ground or otherwise disposed off. (12) To gradually, but perseveringly carry out the recommendations made in the previous report for improving the conservancy a

English Bazar Town—Inspected in December 1887—I went round the town with the new Chairman, the local Medical Officer, and the Vice-Chairman, and was much disappointed to see that very little had been done since I last visited the town, nearly two years age, to improve its sanitary status. Many of the defects then noticed were still observable. It seemed to me that English Bazer was going back in sanitation; perhaps there may have

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been some neglect during the election times, but generally sanitary matters were not so well looked after as they used to be, even when things were by no means satisfactory. The arrangements under the heads of drainage, conservancy, and disposal of the dead were as defective, and in some instances as objectionable as ever. On the whole, I was obliged to record an unfavorable opinion on the administration of the Municipality by the old Committee, who did not appear to have exhibited proper interest in improving the condition of the place committed to their care.

The sungestions were:—(1) To do the best to gradually remove the grave insanitary conditions affecting health and carry out permanent sauitary works. (2) To frame and bring into operation a code of bye-laws under the Municipal Act. (3) To gradually give effect to the suggestions offered under the head of roads in the last roport. (4) To keep the sides of the roads and drains free from jungle, and to call upon the people to do their part of the duty with respect to all lands owned or occupied by them, in the latter case the cultivation of the grounds as gardens being the best method of destroying jungle. (5) To gradually obliterate the existing filthy pits and excavations in the manner suggested in the provious report, and to prevent the further creation of these at random. Also to consider the desirability of annually setting apart a small portion of the income for filling in one or two of the worst holes in crowded localities with mud and sand from the river chiv. (6) To keep the drains quite free to act at all seasons and make some attempt to flush them at short intervals. (7) To provide proper outlets to some of the old drains. Also to gradually extend the system of pucca shallow sidedrains throughout the town beginning of course with those quarters where they are urgently wanted. (8) To gradually carry into effect the recommendations made in the last Inspection Report under the head of water-supply. (9) To scrupulously guard against the banks of the river being resorted to for defrocation. (10) Either to properly carry on the process of filling up with rubbish the old tank I saw in a thickly inhabited quarter, or to stop further action in this direction the present masses of rubbish being covered with earth from the river bank. (11) To preseveringly carry out the roforms suggested in the last Report under the head of conservancy, those that can be done almost inexpensively receiving attention at once. (12) To remedy the defects pointed out under the head of markets and slaughter-houses. Also not to lose sig

Hazaribagh Town.—Inspected in December 1887.—I inspected the town accompained by the Civil Surgeon and the Vice-Chairman, a native gentleman, who takes great interest in municipal matters, and was glad to find that some improvements had been carried out since my last visit. On the whole the sanitation of the town was considerably better than before, but could not yet be called to be satisfactory. The wants of the place were still many, and some of them required early attention.

The suggestions were:—(1) To devote every year a larger proportion than 6.74 per cent.

The suggestions were:—(1) To devote every year a larger proportion than 6.74 per cent. of the income to remove the existing defects and carry out such other works as are calculated to permanently benefit health. (2) To construct one or two good pueca roads through Khirgaon and Mulla Toli, care being taken to open up these unhealthy localities as much as possible. (3) To make the outlet of the main central drain straight and wider after making the flooring of the upper part pueca. (4) In constructing pueca drains in future not to make their bottoms flat but oval. (5) To have the metal buckets at the public wells connected with chains running over pulleys or attached to counter-weighted lifters to facilitate the drawing of water. Also to strictly prohibit the indiscriminate dipping of vessels into the wells. (6) To provide a small Ranigunge pipe or pot ring well in the outlying part of village Khirgaon. (7) To properly carry on the dry earth system in the public latrines. (8) To require the methers to live close to the latrines, and to employ the methranies to attend to these places when their husbands are away. (9) To gradually provide more public latrines at convenient places, of course separate ones for the two sexes. (10) To introduce Part IX of the Municipal Act. (11) To consider the advisability of horrowing or acquiring smaller pieces of land near the different public latrines for trenching night-soil. (12) To gradually give effect to such of the recommendations made under the head of conservancy in the previous report as have not yet been attended to. (13) To provide, as funds permit, a few good pueca or corrugated iron sheds to the municipal market. (14) To construct in the burning ground a shelter shed for those bringing bodies for cremation. (15) To actively push on vaccination and place the town in a state of proper protection. (16) To continue to take interest and try to obtain as much accuracy in registration as possible.

Ranchi Town.—Inspected in December 1887.—I visited Ranchi in company with the Vice Chairman, Baboo Saroda Kumar Aikath, and was very sorry to see that little had been done to improve its sanitation during the two years that had elapsed since last I had been here. The water-supply arrangements were not what they should be, while those under the head of conservancy were in some respects still very defective. In fact, with the exception of roads, no other branches of sanitation appeared to have received proper attention at the

hands of the Commissioners whose indifference to carry out the improvements that had been repeatedly urged in former reports was most unfortunate. Much, it seemed, had yet to

been repeatedly urged in former reports was most unfortunate. Much, it seemed, had yet to be effected to put the town on a satisfactory sanitary footing.

The suggestions were:—(1) To do all to gradually remove the existing defects and carry out permanent sanitary improvements. (2) To construct one or two good roads through the lower part of Gudri Bazar and Chamar Tola, particular attention being paid to open up these unhealthy localities as much as possible. (3) To gradually convert the kutcha drains into pueca saucer-shaped ones, the drains in the crowded localities receiving this attention first. (4) Wherever the drains are made pueca to require all house-holders to do their part of the duty and have all house-drains made pueca, and joined to the former the use of half Engigunge drain-nipes for this purpose being encouraged as much as ing this attention first. (4) Wherever the drains are made pueca to require all householders to do their part of the duty and have all house-drains made pueca, and joined to the former, the use of half Ranigunge drain-pipes for this purpose being encouraged as much as possible. (5) To have the masonry around the mouths of the two wells in the public market thoroughly repaired, and to see that their drains are not blocked with rubbish. (6) To renew the wooden frame-work over the wells that require it. (7) To make the conservancy establishment keep the surroundings of all wells scrupulously clean. (8) To consider the desirability of providing each public well with a metal vessel attached to a chain for raising water. (9) To construct some more properly protected pueca wells at places, such as the Mocheepara, the smaller municipal market, &c. (10) To require the people to have the mouths of the private wells properly protected from inward drainage. (11) To provide at convenient places good public latrines having corrugated iron walls standing on a pueca plinth of good masonry and cement. (12) To have the latrines for the two sexes quite apart from each other. (13) To provide proper receptacles for focces, &c., in each cell of the public latrines, and to carry on the dry-earth system properly. (14) To provide more trenching grounds conveniently situated to the public latrines and the different parts of the town, and to adopt the system of shallow trenching, the trenches being dug in lines one foot deep and one foot wide, and only six inches of night-soil put into them, and the remainder filled with earth. (15) To put a stop to the irregularities noticed in connection with the administration of the Compulsory Vaccination Act. (16) To fully utilize the provisions of the Compulsory Registration Act, particularly the penal clauses, and to require the tax-collector and the overseer to report all births and deaths as a check over voluntary registration. (17) To induce the midwives to give information of all births which mation of all hirths which they attend, paying them a small fee for doing so, if funds permit.

Suri Town.—Inspected in December 1887.—I went round Suri with Mr. Grant, the District Engineer, and a Municipal Commissioner, and the Civil Medical Officer, both the Chairman, who is the District Magistrate, and the Vice-Chairman, who is the local Government Pleader, being absent from the station. Mr. Grant knew the town well, so apparently did the Civil Medical Officer, who had evidently given attention to certain insanitary places and conditions. The sanitary status of the municipality was almost the same, if not worse than before. The grave defects that were noticed on the last occasion were still met with—the result of maladministration of the Commissioners, who had acted in the face of the advice given them in the matter. The arrangements under the heads of drainage, watersupply and conservancy were as bad and unsatisfactory as they could possibly be, and yet the suggestions offered in the last Inspection Report to improve them had been absolutely ignored. In fact, the whole administration of the municipality appeared to be a complete failure in all sanitary concerns, and was being carried on in a manner that can only bring municipal self-government into discredit.

The suggestions were:

(1) To take interest in municipal affairs and devote as much money as possible to remedy the serious defects that still exist under the several heads of sanitation. (2) To satisfactorily administer the sanitary clauses of the Municipal Act. (3) To make every endeavour to gradully get rid of all filthy hoteleast and excavations. (4) To consider the expediency of acquiring one or two hollows in central positions, digging them out into good serviceable tanks, and reserving them for drinking only, the spare earth being utilized in filling up neighbouring pits and holes; also to induce the rich owners of pits to treat some of them similarly. (5) To no longer permit the drains to be covered over, and to take steps to remove all pucca erections over side drains which have been erected since 1867. (6) To make some arrangements for flushing the pucca drains at regular intervals, the water for the purpose being raised from some of the conveniently situated tanks by means of native basket lifters of water. (7) To keep the kutcha drains free to act, and to strictly prohibit the throwing of rubbish into them; also, in clearing them out, to see that the debris is placed not on their sides, but on the road, and thence removed by the conservancy carts. (8) To remove on their sides, but on the road, and thence removed by the conservancy carts. (a) To remove all lives from the banks of the tanks that have been reserved for drinking purposes. (9) In selecting a new site for a well, to make an experimental boring to find out whether good water is procurable there. (10) In place of one or two large masonry ones, to construct cheap and numerous small wells, using Raniganj drain pipes of suitable size instead of the ordinary earthen well-rings. (11) To give effect to the suggestions offered under the head of conservancy in the last Inspection Report, and to make proper arrangements for the regular removal and effectual disposal of all house-refuse, sewage, night-soil; &c. (12) To no longer allow the Compulsory Vaccination Act to remain a dead letter, but to fully utilize its provisions, and do all that is necessary to put the town in a proper state of protection. (13) To carry out the recommendations made under the head of registration in the last Inspection Report, and to adopt measures generally to place registration of births and deaths, which is now in an extremely backward state, on a satisfactory footing.

OFFICE OF THE SANY. COMMR. FOR BENGAL,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

R. LIDDERDALE, M.D.

APPENDIX No. VI.

STATEMENT SHOWING THE SANITARY CONDITION OF THE VILLAGES IN EACH REGISTERING CIRCLE IN BENGAL. AND THE MORTALITY FROM SMALL-POX, FEVER, CHOLERA AND BOWEL-COMPLAINTS,

DURING THE YEAR 1887.

Statement showing the sanitary condition of the villages in each Registering Circle in Bengal and the ratios of Deaths from Small-pox, Ferer, Cholera and Bowel-complaints therein, during the year 1887.

			RATIO	RATIO OF DEATHS PROM-	THE PRO	1 1 1 1 1 1	SAWITARY	SAWITARY ESTIMATE OF VILLIGES IN EACH CIRCIR UNDER THE HEADS OF-	ER THE HEADS OF—
District.	Name of Circle.	Population.	.xoq-llamë	Fever,	Cholora.	Bowel-com-	Drainsge.	Water-supply.	• Domestic cleansing.
	Burdwan—Town	080'+6.	2	13:11	1.90	3	Drainage is defective. The flow of water and and ben-soil drainage have been interfered with. The drains originally desirand to discharge into the river now drain into tanks and hollows, which have no outlets. The main drains are deep and defective in levels. The smaller drains do not admit of being flushed some, and consequently smell unpleasantly in out, and consequently smell unpleasantly in the dry weather. The house drains are not connected with the roadside drains.	The town possesses an admirable system of waterweek, but it is confined to its northern division and has not yet been extended to the southern, where the water-supply is laken from very flithy tanks and sthe highly polluted. Banks river. Bren in the northern division the supply is in adequate, and ho se connections with the waterworks are insufficient. The tanks in this division are now used for bathing, but they are very flithy. There are also in the town one protected public well and numerous private ones, in a linguage of less bad condition, which are used for all purposes.	The conserrancy arrangements are on the whole satisfactory. Surface cleansing is well attended to, but the bye-lanes are not swept often enough. There is an excellant set of public latrines, 10 in number, but the scheme has not been extended to the whole town. There are no public urinsls. The private latrines in the localities where the public once are are under very satisfactory municipal nanuacement. This system also calls for extension. Fromiscuous deforcation is still permitted. There are no well-privies. The night-boil is properly trenched, and portions of the trenching ground are cultivated with good results. Fluid kitchen refuse is no astalactorily removed. There are many tanks or waterholes and portions of the tenching ground are cultivated with good results. Fluid kitchen refuses is no labels and pits about the town which form filthy cesspools. The supervisius cetabilishment requires to be strengthened and better officered. The arrangements connected with the disposal of the dead and markets and slaughter-houses are open to improvement.
	Burdwan-Zural	27,530		19.12	\$	Š	Drainage of most of the villages is defective	Is taken from tants which are used promiscuously, and defiled more or less in other ways; but the tanks which are situated outside the villages generally contain good water. Where there are rivers their water is used, but low castes throw their dead into them.	The pathways between the houses abound in superfluons vegetation and filth. The drains are in a filthy condition. The villages, particularly those inhabited by Mahomedans, are surrounded with jungle, the growth of which is encouraged in order to hide the females more effectually from public view.
	Calas - Town	10,901		10-73	16.	85. 63	The drainage is defective. Only the northern part of the town has been supplied with pucca drains.	is taken from the river and from the large municipal tank.	Surface cleansing is att-nded to. There are no public latrines. The night-soil and fluid refuse 'from the private privise are buried in waste land away from habitations. Interment within compounds of houses is occasionally allowed.
•	Culsa-Rural	61,583		16.92	61.	Ģ	Drainage of most of the villages is defective	'Is taken from tanks which are used promiscuously, and are otherwise more or less polluted. Those of the tanks which are situated outside of the villages contain potable water generally. Where there are rivers their water is used. On the whole the water-doubly is insufficient.	The spaces between the houses abound in superfluous resetation. The paths and drains are in a dirty condition. Some houses are surrounded by jungle which is resorted to for deforation. An conservancy arrangements.

			RATI PER 1	40 000'1	RATIO OF DEATHS PROM- PER 1,000 OF POPULATION.	OM-	SANITABY	SABITARY BSTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	THE READS OF -
riet,	Name of Calle.	Population.	Small-pox.	F6ver.	Oholora.	Bowel-com-	Drainage.	Water-supply,	Domestic cleansing.
***************************************	Assensole - Eural	878'86	1	12-37	झ	83.	The villages are situated on elevated ground and the drainage is free.	Water is taken from tanks and depressions in which ain wafer collects. Many of the tanks are large and good.	No conservancy arrangements. Fields and waste lands are resorted to for deferention. Betnes and cowdung are collected in pits and excavations till required for manure.
	Sahibganj — Kural	75,171		15 th	ş	S.	Drainage flows into fields, tanks and rivers	Is taken from tanks and rivers. The quality of the water is not good. The tanks have nilted and are choked with weeds.	The villages consist chiefly of mud houses and huts built in rows and crowded together. There are no roads in the villages. No conservancy. Tank sides, as well as well and surrounding houses, are reserted to for defrecation.
	Banigan] – Toum	10,887	i	13.22	08.50 .50	6.21	The natural drainage is good, the t.cwn. being situated on a sioping laterite soil. But the drains are ill-constructed and badly levelled, and as a rule empty themselves into anks.	Is taken from tanks and wells, but is not adequate. The sincle municipal tank and five other unprotected private ones have been reserved for drunking purposes. Four of the wells have also been protected. On the whole the water-supply is inpure.	Conservancy arrangements are not well carried out, The sweepings, &c., are removed by contract, but very incompletely. Heaps of rubbinh are to be found behind any house-g, on the fas its of tanks, &c. The cattlesheds are filthy, and the dung, &c., are collected in the premises and only removed ou computation.
:	Raniganj—Rural	135,646		11.50	71.	.	"he natural drainage of those villages that are situated on elevated ground is good, but the drainage of the low-lying villages is very defector.	Is taken from the river Damuda and from tanks. The former and most of the latter afford a good supply. The water of wells is also used.	The houses are generally nest, clean and dry, but in many rillages are ill-rentilated and crowded. No conservancy. Defecution is carried on in jungles and waste lands, and refuse and cowdung are collected on footpaths.
	Khandoghose— Zaral,			18:33	ŝ	Į,	Orninges flows into fields, tanks and rivers	The riperian villages obtain their water-supply from No conservancy ting famuda. Bank and Adjai, while the villages hish are to be for tanks.	No conservancy arrargements. Heapstof manure rub- bish are to be found more or less in every village.
	Royna - Bursi	87,190		12.88	2 5 .	÷	Drainage generally is imperfect. Some of the villaces, however, are situated on elerated! ground, and are dry.	Is taken from tanks which are used promiscuously, and are otherwise more or less poliuted. Those of the tanks which are situated outside of the there sometime potable water generally. Where there are rivers their water is used. On the whole the water-supply is insufficient,	The spaces between the houses shound in unperfluous vegetation. The pathways and drains are in a filthy condition. Some houses are arreconded with jungle which is resorted to for defrenation. No conservancy arrangements.
•	Gengoor or Setze- chis—Barral.	102,746	. 01	14.88	.11	3	Drainage flows into fields, tanks and rivers	Is taken from tanks, ponds and excavations. Some of the finit are large and very good; the ponds are generally choked up, but their water is used only for cultary purposes. In general tanks situated outside of villages contain good water, but being at a distance are not frequently resorted to. The tanks in the villages are systematically polluted by women.	In some villares the houses are crowded together, ill. ventilated, and surrounded by trees or banboe clumps. No conservancy arrangements. Defocation is carred on in junctes and waste lands, and in some places on roads toforpaths, and banbs of tanks. Pigs serve as exarengers, but in a great measure contributing to the muisance themselves. Oremation and informent are carred on in blaces near tanks. Heaps of refuse and manure are to bounce with orecrywhere. Cattle are kept inside dwelling.

No conservancy arrangements. Reaps of manure rubbiah are to be seen in every village.	The river Bhagiruthi upplies water to the riparian villaces. The villages in the interior obtain their water simply from blus and baors.	Drainage flows into rivers, khals, baois and tailes.	+0. 92.	19-37		82,070	_ \	Purbasthalli—Rurol
The spaces between the houses abound in superduous vegetaton. The paths and drains are in a fithy condition. Some houses are surrounded with ingle which is resorted to for defectation. No conservancy arrangements.	Is taken from tanks, which are used promiseroutly and a e otherwise more or less polluted. Those of the tanks which are situated outside of the villages contain potable water generally. Where there are rivers their water is used. On the whole watersupply is insufficient.	Drainage flows into fields, tanks and rivers	. 13	16.33		25,078		Bood-Bood - Rural
The houses are ill-ventilated, but are kept clean and dry. Some villates are clean, but in some sweepings, cowdung and other retue heaps are to be seen, the reals and footpaths, the nearest juntle, or banks of tanks are resorted to for the purpose. Pins as scarengers, but they contribute to the nuisance themselves.	Is taken from tanks and ponds. Some of the tanks contain good water, particularly those in the outskirts, but as these are at some distance off, they are not generally resurted to. The tanks in the villages are much polluted, especially by women, who anoint themselves with oil and turmeric just before gerting into the water to bathe. The ponds are also used for culinary purposes. Biver water is also used for drinking purposes.	Drainage flows into the bunds and depressions		09:51		\$20,63		Montesaur – Rural
Domestic cleanisng is observed, but no conservancy arrangements. Defectation is carried on in jungle and waste lands.	Is taken from tanks, bunds and rivers. The quality of the water of the tanks is not good, as none of them have been reserved for drinking purposes.	The villages are situated on high ground and are dry.	.33	20.5A	-15	58,969	8 6	Kaksa - Rural
Many of the houses are devoid of ventilation, but they are kept clean and dry. No conservancy arrangements. This place in the matter of domestic cleansing is like Gangon rural.	Is taken from tanks and ponds which are sys- tematically pulluted by women. River water is also used,	Drainage flows into rivers and tanks	91.	14.63	FI 10.	82,943	25 	Kutwa- Rural
No conservancy arrangements, Heaps of manure and rubbish in every village,	Is taken from tanks and from rivers	'10 Drainage flows into rivers and tanks	01. 19.	17.67		73,548		Nongulkote—Rural
The houses are ill-ventilated, but they are kept dry and clean. No conservancy arrangements, This place in the matter of domestic cleansing is like Gangoor rural.	Is taken from tanks, ponds and erravations. Some of the tanks are laree and very good, but most of these unfortunately are situated so far from the villages that they are not often resorted to. The tanks in or near the villages are polluted by women. River water is also used to some extent.	The country is low-lying and marshy. Some of the villages are fooded every year by the rivers Aloy and Damooda. The drainage is defective.	10. 08.	16.88	. ;	73,729		Ketugram – Bural
No conservancy arrangements. Heaps of house refuse and rubbish are to be seen in every village.	The inhabitants of the riparian villages use river water, while those of the villages in the interior resort to tanks for their water-supply,	The drainage flows into fields, tanks and rivers,	61. 05.	16.70	16	87,311		Ausgram - Bural
No conservancy arrangement. Deforcation is carried on in jungles and waste lands. Many villages are full of	Is taken from tanks, a few of which are large and good. The water-supply here is similar to that in Culna rural.	Drainage flows into fields, tanks and rivers		. 99.91		71,709		Selimabad—Rural

1	Domestic cleansing.	The conservancy arrangements are on the whole good; but in the outlying villages they are not carefully attended to, as retuse, dung; weepings, sirger, &c., are accumulated in the compounds of and around the houses. In the other parts surface cleaning is carefully attended to, and the Sweeping, &c., taken outside of municipal limits and burnt. There are three public latrines. Some of the private privies are under municipal management, well-privies have been abuilated. The night-soil is trenched in the jail garden. Houserhes, fluid and soild, is removed outside the town. Arrangements relating to interment and cremation are satisfactory.	The sanitary condition of the villages is bad; accumulations of filth are to be met with crerywhere. The habits of the people are dirfy.	burkace eleansing is fairly attended to, but the refuse throuse me houses is not removed. There are no public latrines. The privace privies, few in number, are no the management of the municipality. There are no well-privies. The night-soil is removed and trenched in pisces fixed for the purpose. In some cases burials take place in the compounds of houses.	The habits of the people are fithy. In some villages the basement of the houses are somewhat raised; in general they are ill-ventilated, their backs and surroundings are fithy; heaps of cowdung and refuse, &c., are kept on the road sides, near tenks, and in pits close to houses.	Domestic chanzing ts on the whole fairly well attended to.	Domestic cleanliness is not at all observed. The condition of the compounds, the fronts and backs and corners of the houses are all shockingly filthy.
R THE HEADS OF		The conservance but in the o attended to a attended to sa accumulated houses. In the pullipation of municipal manager cipal manager The nicht-soil reflue, fluid as Arrangements satisfactory.		Surface cleanant farms and surface cleanant the management well-privise. The in places fixed in the place in the take place in the	The habits of the habesness of the they are ill-ve are filthy; hept on the ros houses.		
SANITARY ESTIMATE OF VILLAGES IN RACII CIRCLE UNDER THE HEADS OF-	Water-supply.	Is taken generally from the river Dhalkisor and is good, as it is filtered through a bed of sand; but during the rains organic matter and refuse are washed into the rivers. There are also numerous tank, but the water in them is so bad that it is not fit for drinking purposes.	Water-supply is taken chiefly from tanks and wells, net hear of which are free from pollution and confamination, as they are not protected by purca parapets against receiving surface drainage, and their surroundings are also fifthy.	Is taken from tanks, which are numerous and contain sood water, but none of them has been reserved for drinking purposes only.	Is taken from tanky, of which a few only contain good water. Generally they receive surface drainage, are full of weeds and vegetation, choked up, and used for all purposes.	Is taken from tanks, which are numerous and contain good water, but only three of them have been reserved for drinking purposes. This small number of reserved tanks for a large place like Sonamukhi is not enough.	Is taken from tanks, the river Damodar and uther water-courses. Impurities of all description pollute the water of tanks and water-courses.
BANITABY	Drainage,	The natural drainage is excellent. The fall is towards the north and south into the rivers. The public drains discharge into the faleds, and the house-drains are generally connected with them. Encrockhments on and obstructions to drains are not allowed.	The drainage is defective. The land is low and marshy.	The natural drainage is gccd, as the fown is situated on elevated ground. The rain water is discharged through drains into the fields. House-drains and encroachments on and obstructions to public drains are looked after.	Drainage is defective. The country is low. lying and maraby.	Drainage is defective. The drains flow first in a northerly direction, and then finally discharge themselves into the river Salie.	Drainage is defective
)X -	-mos-lewell plaints.	1.10	:-	38	ங	3 8 ,	8
THS PRO	Cholera.,	10.1	æ .	\$ 2	ë	**	\$5
RATIO OF DEATHS FROM-	F6V6T.	19.9	12:33	7:38	14.88	8.18	1010
RATIO PBR 1,	.xoq-lism8		1				!
	Population.	747,81	109,804	\$82,128	119,695	12,616	67,400
	Name of Circle.	Bankura—Town	Bankura—Bural	Bedenpur—Town	Bish nput—Bu <i>ral</i>	Sons nukhi – Toten	Sonsmukhi—Enral
	District.	•		Bankura			

The canitary condition of the villages is bad. Domestic cleanliness is not at all observed.	The houses are ill-rentilated. The habits of the people are filthy. There are no conservancy arrangements, and filth is accumulated everywhere.	omestic cleansing is pretty good. The roads and pathways are mostly pucca and in good order, and are kept clean.	In some places, particularly in village Moinspur, the houses are kept clean, but in general they are filthy specially their surroundings, and are here and there convededingether. No conservancy arrangements. People deforcate in jungles. First hall of covoding, refuse, &c., are numerous on reads, backs of houses, &c. in some places the covoding, &c., are thrown out through a hole in the back wall of the cow-shed to collect outside.	The habits of the people are generally clean, and the houses are well ventilated, and their surroundings kept free of fith to a great extent. But instances of filthiness are not rare, an instance being Ullapars, where a collection of refuse almost touching the thatched roof of a house was seen. The dead are buried close to tanks and dwelling-houses. Jungle abounds.	The houses are dark and not well ventilated. Manure pits and heaps are found more or less in all villages. Defocation is carried on mileids and jungles, and on the road and tank sides.	The houses are in general ill-ventilated. Manure pits and leaps of house-retues are to be seen in almost all the villages. Defercation is carried on in fields and jungles, and on the sides of the tanks and roads.	The houses are without proper ventilation. No conservancy arming-ments. Behase of all description are found more or less in all villages. Defectation is carried on in fields and jungles, and on the sides of roads and tanks.
Is taken from tanks and water-courses. The tanks receive impurities of all description, and their banks are defiled. The water-courses are similarly polluted, and carcases are thrown into them, and when dry, their beas are used for defection.	Is taken from tanks and wells as well as from 'khals and rivulets. These sources of water-supply are unfortunately rarely free from pollution and contamination, as they are not protected from surface drainage, entering into them.	Is taken from tanks and wells which are not Domestic cleansing is pretty above suspicion.	Is taken chiefly from tanks which are numerous in this thans, and in general contain good and sufficient water; but cremition is carried on on the banks of some of them. In sone places, however, the tanks are very bad, overgrown with weeds, &c., and they dry up in the hot weather when water is searce. In some villages khal water is used.	Drainage is fairly effective, but the ground is 15 taken from tanks, and is generally sufficient and marshy.	The rivers Kassi and Silai supply water to several villaces, and tanks and wells to the remaining villages of this thans. The quality of the water is not good, and the quantity is not always sufficient.	Is taken from tanks and wells and from rivers in visitables situated on the banks of current rivers. The quality of the water is not good, nor is the quantity always sufficient; the tanks have become silted up and choked with weeds.	Is taken from tanks and wells. The quality of the water is not good. The tanks, as a rule, are used by the people premisuously. None of them are specially reserved for granking purposes. The wells are also not properly protected by puece parapets.
Drainage is defective and obstructed. The ground is low and warsby.	Drainare is defective. The ground is low-lying and marshy.	The drainage is defective	There are no drains, but the natural drainage is good.	Drainage is fairly effective, but the ground is low-lying and marshy.	The villages are situated on elevated ground, and the natural drainage is consequently good.	The country is undulating, and the drainage free. The paths act as drains for rain-water.	The rillages are situated on elerated ground, and the natural drainage is good.
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97.11	89. 6	1	19.08	13:67	0.22	11.14	10.18
<u> </u>		i	İ		1		;
172,607	119,321	į	796°#8	78,909	99,122	95,502	32,689
Gungajalghatti— Bwral,	Onda-Rural	Kotalpur— <i>Tour</i> s	Kotalpur – Rural	Indas-Rural	Scopel or Khatra- Rural.	Baipur— <i>Rural</i>	Siml 1pal—Rural

,			RATIC PER 1,	000 UF P	RATIO OF DEATHS PROM-) X – 10 X,	SANITABY	SATITARY ESTIMAIR OF VILLAGES IN EACH CIRCLE TRDER THE HEADS	B THE HEADS OF-
District,	Name of Circle.	Population.	Small-pox.	Fever.	Cholora.	Bowel-com- plaints.	Drainage,	Water-supply,	Domestic cleansing.
	Suri-Iven	7,848	:	65 21 80	23	ja ja	The drainage generally is defective. Many of the drains empty themselves into tanks scattered throughout the town. The main outlet drain of the town when last seen was silted up with sand and rubbish, and had been allowed to remain in this condition since last rainy sea-on.	The general water-supply of the town is of the very worst description, any supply of a talerably good character being limited to a talk and well in the kitchery compound. There are many private tanks, but most of them are overhung by trees and bushes, which must throw down immense quantities of leaves to rot in the water and thus render it impure.	Surface cleansing is attended to, and the sweepings, &c., removed out of town. There are only three public latrines, which, however, are not much resorted to, the people preferring the fields and other convenient places. Private privies are numerous. They are cleaned by public mehters, but the night-soil from them is thrown on a spot outside the municipality to fester and dry up there: that from the public latrines is put into a small thench, but not covered over with earth, as it should be.
	Sari-Rural	118,891	i	23 30	à	;3 ;2	fost of the villages are situated on elevated sround and are dry. The country is undusting and the drainage free.	Maurakshi and Kana nudi in villages close to the river Maurakshi and Kana nudi in villages close to the river banks. The tanks are badly used, and the people deferente on their sudes. On the whole the quality of the water is not good.	The people are very dirty in their habits, particularly the Sadropes. Cattle exerts, refuse, and sweepings lie even where. Some of the villages are covered with rat.k regelation, and the ditches are fifthy.
•	Dubrajpur—Bural	126,566		16 20	25.	2	Dringre is bad; in some places water-lorging occurs during the rains.	is bad; in some places water-lorging is taken from many choked and silted-up tanks. In places it is naturally good, but allowed to become bad. In a few places it is clean and good.	Domestic cleanliness is not observed, particularly in villages inhabited by Salgopes and Mahomedans. With the exception of village Hetampore, the sanitary condition of the rest of the villages of this thans is bad.
rbbam	Rampur Hât— <i>Rural</i>	87,774		16.93	18.	ä	Most of the villages are situated on high ground, and the dramage is pretty free,	Is taken from tanks the water of which, though naturally wholesome. is allowed to get overgrown with regetable products.	The people are of clean habits but there are no conservancy armagements, and cowdung is to be seen in heaps before houses.
	Bolpur—Rural	107,898		r.a	9.	န	The natural drainage is good, the villages being situated on elevated ground,	Is chiefy taken from tanks which are charged with line. The people also take their water-supply from natural water-courses called kundus, which exist in this thans.	There are no conservancy arrangements. People defocate in fields and gardens; in fact anywhere and everywhere.
	Sakulipur— <i>Zurol</i>	122,728	!	17.12	ģ	15	Orainage is bad in places, causing rain-water to stagnate,	Is taken from tanks and ponds: the latter are highly polluted, and the former contain decayed vegetable matter and are fouled by defecation. In the dry season water is scarre. Some of the tanks whose beds are of lime-stones contain wholesome water.	The houses are ill-ventilated. No conservancy arrangements. Defectation is carried on in fields and grardens. Condumg is accommutated in pits for manure. Some of the villages are full of excavations and hollows containing starmant water. Sweepings, refuse and cattle litter are collected before dwellings.
	Moureswer Rural	88,536		33.6I	\$	85	Drainage is very defective. During the rains the footpaths become altogether impassable with water, which lasts till the end of October.	Is taken from tanks which are overgrown with veretation. Some of these tanks, however, contain wholesome water,	No conservancy arrangements. The people defences in fields and jungles. Cremation is carried on on the banks of the Dowarka river.

Is taken from tank, some of which are good, some bad, and some choked up with w-eds, &c., conservancy arrangements. Manure and rubbish bespe Water-supply is also taken from ponds and nuddis are to be met with everywhere. Defeccation is carried which are generally filthy. When the tanks dry on in fields and jungles, and on the road and tank sides. up there is a great scarcity of water.	The drainage, although not very bad, is still is taken from the river Cosve, as well as from determine, and the kniths ones are generally tanks and wells. None of the tanks have been and the kniths ones are defected and the kniths ones are defected which is not properly attended to. So the drains are for the most part protected, although not properly attended to. So and so the drains are for the most part protected, although not are for the most part protected, although not are completely removed and properly trenched; good and antifering water folies, premises. The armagements for the disposal of the dead are not quite satisfactory.	The Cossye River water is used where obtainable. Domestic cleansing is on the whole good, but there are There are many ponds, but they contain foul no conservancy arrangements, water, Tankwater is also used, but its quality is bad. There is a general want of good water.	The people of the riparian villages obtain their surface cleansing is attended to. There are 10 public restraints and those far lairnes which are cleaned twice a day, but they are from it use tank water, the quality of which is insufficient. The night-soil from them and the private not good, as none of the tanks has been reserved Cespits exist. Rurals within the compounds of houses is carried on.	Is taken from tanks which are generally bad and in places unsufficient. In some places, however, thouses are ill-ventilated and there are no conservancy in there are good tanks with purce, taking, exclusion there are good tanking. Separate tanks are on. Own-shot's are not kept clean. The pathways are not one to the places of the construction of the pathways are lithy. Sweepings and refuse are generally accumulated for manure close to houses. In some places cremation is carried on got the banks of tanks.	There is no scarcity of water in the town, which shounds in tanks and jonds, but they are all, without any exception, full of weeds, sedges and other equality exception, full of weeds, sedges and other equality exception, full of weeds, sedges and other equality exception, full of weeds, sedges and other exception. In other early formed they are to see the sent segment of room for improvement. There are no public latines, and the series of those for the sent segments in the series and receive segments of room for improvement. There are no fixed places for remarking this town. There is no fixed places for cremation, which is carried on in several spots of ground in different localities. The people complain of the close proximity of the burial-ground to their dwellings.
	still Is takes lice re-erve whole sufficient succession whole sufficient succession want of wa		are The peowater from from for dr.	Is taker in place there sively used it	
Some of the villages are situated on high and some on low ground: the drainage of the former is pretty free, but that of the latter is very defective.	The drainage, although not very bad, is a deterive, the purca drains are general obstructed, and the kutcha ones are detrive in level. The cleansing of the drais not properly attended to.	Drainage flows into fields and tanks, and is defective.	Drainage is defective, but the drains maintained in fairly good order.	Drainage is defective. It flows into khals, bhils, and swamps.	The drainage of the town is for the most part effective. The readside drains are in a good state of repair and not obstructed,
,	9.4	 ਫ਼	1.81	å	90.9
<u>چ</u>	÷s.	Ģ	150	19.	
87.71	89.4	17.94	66.4	12.79	12:64
	i i		i		
133,897	33,560	123,646	12,638	71,455	12,257
Nilhati, including Pulsa - Burct.	Midnapur— <i>Tour</i> n	Niduspur—Rural	Ghatal—Toum	Ghefal-Rural	Cbunderkons— <i>Turc</i> s
Nilhati, ii Fulsa—Ru	- Midnapur	•	Ghatal - 70	Ghatal—Et	Chanderko

1971 198 179 Drainge is free It iskes generally from tanks which are, as a pures, that there water is list. Propriet continue to the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue appearance of the continue and at receivement runs on the eastern all they are unposted with the protection of the continue and and it receivement and it altered the continue and and are continued and an and it receives the continue and an analyst and an analyst and and a continue and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst and an analyst an analyst an analyst and an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst and an analyst an analyst an analyst an analyst an analyst an analyst an analyst an analyst and an analyst an analyst analyst and an analyst and an analyst and an analyst analyst analyst analyst and an analyst analys			 	RATIO FER 1,	RATIO OF PRAINS FROM- FER 1,404 OF POPULATION,	THS FRC	M− fox.	SANITARY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	R THE HEADS OF—	1.1
1870 119 118 119 Drainge's iffee	Na	me of Circle.	Topulation.	Small-pox.	Fever.	Cholera.	Bowel-com- plaints.		Domestic cleansing.	_
10.309 12:19 'G. The drainage is not thoroughly effective. The ls chiefly taken from that, of which there are drawn and the case and is received most bout a mile distant from it, now of the tanks has, however, been regered to a lives of the different busies. Where is the tanks has however, the regered of the common of the town and the case of the town and the case of the town and the same of the town and the same of the town and the same of the town and the same of the town and the same of the town and the same of the town and the same of the town and the same of the town and the same of the town of the	Chan	derkona— <i>I</i> ! w <i>ra!</i>	58,510	:	191*	13 80	119	Drainage is free	are not properly as are fithy, but tunk. There are no generits. Fields an as latrines. Carcaste lands.	
6,266 'C2 13'90 2'03 5'83 Drainage is very defective Is from tanks and the river Ruparatin, the water of the control of the town is very scarce. 6,263 17'15 'S6 3'01 Drainage is on the whole fair. The drainage is control to the town is very scarce. 6,263 17'15 'S6 3'01 Drainage is on the whole fair. The drainage is control to the town is very scarce. 6,263 17'15 S6 3'01 Drainage is on the whole fair. The drainage is control to the town is very scarce. 17'16 drainage is on the whole fair. The drainage is control to the town is very scarce. 18'17'18 S6 3'01 Drainage is on the whole fair. The drainage is control to the town is very scarce. 19'17'18 S6 3'01 Drainage is on the whole fair. The drainage is control to the town is supported to the majority of them, however, the majority of them, however, the standard is districted by means of nulls which we many in the same into the faranteum theorem is control to the reduge properly protected from pollution, attention. 18'17'18 S67 The drainage flows into the Rondeger that is taken from tanks, ponds and dobas. There is not a single cooft and, Scarcify of good draining where to a single cooft and, Scarcify of good draining where to a single cooft and, Scarcify of good draining where is much felt.	Ran	jibupur— Toerz	10.909		12.10	ಫ	ar ar	The drainage is not thoroughly effective. The laschiefly taken from tanks, of which there are Tarajuli streamlet runs on the eastern side cores, but only a few an large and really grood, of the town, about a mile distant from it, none of the tanks has, however, been regerred and it receives most of the drainage of the drinking purposes. Un the whole a writtown and its officer and no pathways this town, and wholesome water is much felt in the busices.	The dwelling-houses are without windows or ventilator. Their basement is generally not very high, nor perfectly dry. Domestic cheming is observed more or less throughout the town. There are no public latrines, but a few private ones. The majority of people resort to fields and jundies for deforation. Carcases are thrown on waste lands and vagars. Cremation is carried on near the bank of Tarsjulikhal. The Mahomedans bury their dead near their waste lands.	
6,293 17-15 '56 8'01 Drainage is very defective Is from tanks and wells. Pure drinking, water is very scarce. 6,293 17-15 '56 8'01 Drainage is on the whole fair. The drainage of the gouth-western portion of the town is effected by means of nullsa which capty in this town. I he majority of them, however, whereas that of the north-eastern portion of the south-western portion of the town is effected by means of nullsa which capty in the same and other aquater plants, and receive west, whereas that of the north-eastern portion is toward's fields, whence the, water from the same used existing bridges and culterts are in good for miscellancous purposes, and are thus open to order, but the klackunathore khall, "where the, "water from weeds, &c. Almost all the tanks are used existing bridges and culterts are in good for miscellancous purposes, and are thus open to order, but the klackunathore khall, "where the, "water form weeds, &c. Almost all the tanks are used existing bridges and culterts are in good for miscellancous purposes, and are thus open to order, but the klackunathore khall, "sing projected from pollution, and reserved solely for drinking, and reserved solely for drinking, which drains the water of the villages. 80,040 '01 12'18 2'17 2'67 The drainage flows into the Sondecer khall however, not a single good thank, Scarcity of good drinking water is much felt.	Ta Ta	1 1	80,049	15.	12.18	21.2	2:57	There is no drainage ls from tanks and the river Rupuarain, the water of which is not very wholesome.	Domestic cleanning is pretty fairly attended to, but there are no roads and no conservancy arrangements.	
6,235 17.15 36 301 Drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the whole fair. The drainage is on the side-drains require much over form is classing bridges and culturers are in good worst forms of polition. Some of them require to be re-dug properly protected from pollution, and reserved solely for drinking. 39,049 vii 12.18 2.17 2.67 The drainage flows into the Rondeger khal is taken from tanks, ponds and dobas. There is however, not a single good tank, Scarcity of good dranking water is much felt.	Ę.	ilandpur—Rural	80,569	<u>6</u>	18.90	£0.3	88.8	Drainage is very defective ls from tanks and wells. Pure drinking, water is very scarce.	Domestic cleansing is on the whole fairly well attended to, but there are no conservancy arranguments.	
89,049 '01 12'18 2'17 2'57 The drainage flows into the Rondeger khal Is taken from tanks, ponds and dobas. There is however, not a single good tank, Scarcity of good drunking water is much felt.	₫.		\$62,29	į	17.15	96.	70.0	Orainage is on the whole fair. The drainage of the south-western portion of the town is effected by means of nullas which empty themeters into the Keris Mal on the south, parties in the Keris Mal on the south, parties that of the nurth-eastern portion is towards field, whence the, water from such as the south of the nurth-eastern portion is towards field, whence the, water from weeds, c. Almost all the tanks are used existing bridges and culterts are in good order, but the side-drains require much attention.	The houses with some exception are kutchs, and consist of mud walls and thatched roofs. They are badly ventilated, and their floors are generally low and rather damp. The courgrants are kept fairly clean, but the surrundings of the premises are often dirty. General conservancy is almost nil, there being only one mether. There are no public latrines. Promiscous deficeation is therefore very great here. The dead are either burned or buried in grounds set apart for the purpose; burials being, however, also carried on by the Mahomedans near their dwellings.	
	뒽		80,040	to.	12.18	2.17	2.27	The drainage flows into the Sondeger khal Is taken from tanks, ponds and dobas. There is which drains the water of the Villages, drinking water is much felt.		

			IAAAIA			
Honses are badly built of mud walls and thatched roofs. They are runall, without windows and scattered. Their floors are low, but dry. The ccurtyards of houses are kept pretty clean. There are no roads, but footpaths, which are ma had condition. Cow-sheds are separate from dwelling-houses and are kept pretty clean. No concervancy arrangements exist. Bamboo topes, footpaths and waste places are used as latrines, load cartie are thrown into fields. Cremation and burial arrangements same as in other rural tracts.	Same as in Raghunathpur thana described above, with this exception, that the cattic-sheds are in some places large, open, and clean.	Same as in thans. Keshpur, with this exception, that the cattle-sheds are in some villages pretty clean.	The dwelling-houses are mostly kutchs with mud walls and inv thatched roof, and and therly devoid of all means of ventilation. Their pluths are generally low and damp. House surroundings are often dirty and full of jungles and bamboo forges. Conservancy inside the a houses is prefty well attended to, but beyond that it is almost mil. The condition of the cow and cartle-sheds is generally bad. Manure pits and cowdung heaps and refuse accumulations within the premises are common.	Same as in Egra thana described below, but here the cow and cattle-sheds are generally kept pretty clean,		Houses are badly constructed and ill-ventilated, and their surroundings are dirty. Sweepings, refuse, cowdung, Act, are heaped near the houses. Cattle are conservancy areately, and the sheds are pretty cleen. No conservancy arrangements exist. Deforestion is carried on in jungles, waste lands, and near khals. Dead tion is carried on near jungles and near khals. Dead tion is carried on near jungles and khals.
Is taken from tanks small ponds, and exeavations. There is no of tank, and although the supply of water is not insufficient, the want of good drinking water is felt.	Most of the villages are situated in the midst is taken from tanks and a few on the tanks of rivers. The drainage from the former cannot but be more or less defective, while that from the latter is far by efficient.	Same as in thana Keshpur, with this exception, that here water is in some cases obtained from the rive Seelye instead of from the rivers Kubai and Doni, which do not flow in this thans.	taken from tanks and sometimes from khals one distance. The former are mere dobas, an re in a very dithy state, and contain dirty with ofference water. In fact the want of good rater is more or less severely felt in almost the villages in this thans. There is not ingle good tank in any of the villages.	Same as in Egra thana described below. Water is also obtained in some cases from the river Suburnareka.	Is taken from wells and the river Suburnareka; the water of both is clear and good. There are no good tanks, and scarcity of water is felt in some villages.	Is taken partly from wells and partly from tanks, ponds, and bandha. In some villages there are no tanks at all, and only a well or two. The water of the wells is clean, but that of the tanks and ponds is dury. The wells have no parapets. There is a great scarcity of good water in some villages.
There is no draimage system. The natural drainage flows into flelds, khals, pits and excavations.	Most of the villages are situated in the midst of fields, and a few on the banks of rivers. The drainage from the former cannot but be more or less defective, while that from the latter is failly efficient.	Same as in thana Keshpur described below	interfered with by holes and is seriously Is interfered with by holes and ditches which abound in the wilages. The village foot paths, which are mostly in a bad state of repair, serve the purposes of drains. Some places become quite water-logged during the rainy season.	Same as iu Egra thana described below	Villages are low-lying and subject to inundation. Drainage is defective	(Villages are situated amidst jungles and fields. The drainage flows into fields and is defective.
88 69	8.3	ie.	#1	\$ 8.	7	\$2
2.03	3.16	9 *.	1.61	93.89	iè,	ıı.
18:50	14.79	13:49	34. 18.	17.04	16.35	07-11
50.	.00.		İ	1		!
80,569	130,554	135,786	881. 881.	128,44	139,928	69,782
Muslandpur – <i>Rural</i>	Contai—Barral	Gurbetta—Bural	Narringurh – Rurol	Danton-Rural	Gopibullabpur— Eural.	Jhargram - Raral

District. Name : 1		A	(ATIO OF ER 1,006	RATIO OF DRATES PROM- PER 1,000 OF POPULATION.	FROM-	1 -	SANTABY BI	SANITABY BEITHATH OF VILLAGES IN EACH CINCLE UNDER THE HEADS OF-	THE UEADS OF—
	ėj Population.		*xoq-liam&	Fever.	Howel-com-	.ednistq	Drainage.	Water-supply.	Domestic cleansing,
Galbani—Ruyal	i	68,617		0 5-21	<u> </u>	8. The seq	There are no drains and the natural drainage Is is not efficient. The roads and foot-paths T is not efficient to the surface-water into the publication.	taken from Towal nuddi, wells, and springs. It he wells are deep and have rudely-made stone namics, which do not provent surface dramage owing unto them. There is not a single good water in the name of the want of good water in much felt.	Houses are mostly built in rows. They are small, badly, constructed, and ill-trentilated, and there surroundings are dirty. Sweepings and release are kept in heaps near dwellings and road-sides. Cattle-sheds are separate, but close to houses. They are not generally clean. Cow-dung, &c., are heaped near them. Dend cattle 'are thrown into jungle and waste places. No conservancy arennesments exist. Defocation is carried on in jungles and waste places.
Binpur – Rural		- 50,709	13 13	8.80	6.	2	Most of the villages at a situated amidst fields. It and implies. Dramage is very it if it in a fone of the villages are periodic-lit inundated by the river Cossys overflowing its banks.	is taken from the river Cossye, tanks, and wells. The river water is good. Tanks are small, shallow, and covered with weeds and aquatic plants. The wells are kutcha and without parapets, but their water is good.	Houses are kutchs, small, and without windows, and their surroundings are clean. Cow-sheds are separate and pretty clean. Heaps of cow-dung and other reture are in some places. No conservancy arrangements exist. Promiscuous defeocation is carried on. There are no good roads. Dead cattle are thrown by the riverside and into jungles. Dead bodies are burnt on the banks of the nver Cossye or near jungles.
Reshpur-Rural	-	95,60	- -	15.67	\$	\$	".me villages are situated in the midst of Is fields and some on slightly higher level than a the arrounding country. The dramage from the is as a rub defective, while that from the latter is to some extent free. The rain water eventually drams much the fields, but there are no such thangs as nulias or bridges to carry it off quickly.	obtained from dobes, tanks, the Kubai nudd and the treet Doni, and in some cases from fells. The bas and the tanks are as a rulery feul, and many of them dry up during it unmer. The want of a good water-supply everely felt in some places.	i, With few exceptions, the houses are made of mud walls and thatched with straw, their plints. being generally not and damp. They are not crowded together, so there is ample room for external perflation, but internal venit is ample room for external perflation, but internal venit is ample room for external perflation, but internal venit is ample room for external perflation. The court, and are often very dirty. The cow and the cattle sheds are not kept in the state in which they should be. Deflocation is carried on in all convenient places. Cremation and burial arrangements same as in other rural tracts.
Daspur—Rarel		115,269	800.	12.10	8	्यु इंद्र	Some villages are situated on elevated ground in and some are low-lying. The drainage from the lorener is to some extent effective, but that from the latter, except in the case of a few individual houses, is very bad. The villages in this thans are moreover subject to inundations.	Is taken from the river Silai and from tanks and The dohas which are almost numberless. The latter of dohas which are almost numberless. The latter possing vegetation and polluted in every possible way. Many of them also dry up in the hot weather. The want of good diriking-water is weather the want of good diriking-water is more or less severely felt is most places removed from the river.	The houses are mostly kutchs with thatched roofs, and are built on raised grounds and sometimes on mounds of earth to grard against being washed away by inundations. Their surroundings are in several instances fairly free from dirt and house-refuse. The cow-sheds are generally small, but are apart from the houses and are generally small, but are apart from the houses and are generally small, but are apart from the houses and are kept somewhat elean. The proble reserve for defection on maidens and waste lands and other convenient places. The Hindu dead are burnt on banks of tanks, khels, and rivers and on waste lands: the Mahomedans bury their dead either near their houses or at the outsaking a string of the village.
Debra-Rurai	ag :	70,126		94.13	4	8.	The natural drainage of this thans flows into the rivers Cosye and Seelye, and also into tanks and dobas. There are no roadside drains.	Is taken chiefly from filthy tanks and dobus, and from the rivers Cossye and Seelye. The tanks and dobus are full of weeds and grass, and their water is unpure. There being no good tanks, most of the villages, with the exception of the riparian ones, suffer from great scarcity of good drinking water.	Some of the houses are pucce, but the majority of them are kutcha. They are not crowded forether. They floors are ill-rentilated.

Sabong—Zurai	201,714	600.	16.95	1.28	19.	The same as in thana Daspur described above	The same as in thana Daspur, with this exception, that instead of from the S-elye river, water is in some cases obtained from the river Kongrabati and the Kanalesharikhal, the latter being full of rank weeds and grass.	The same as in thana Daspur, with this excertion, that the house surroundings are often very dirty, the sweepings, dung all sorts of refuse matters being col- lected in and around the premises.
Panskurah—Rural	142,051	700.	15:33	1:36	3.	Is on the whole effective owing to there being numerous irrigation channels which carry off the rain water either to the main canal or to the river Rupanarain. Most of the villages are, however, totally watting in drains properly so called, the narrow footpaths serving there as drains.	Is obtained from tanks, and also in several instances from the canal and the river Rupnarain. The supply is fairly sufficient and good.	The houses are made of mud was is with low thatched roots. In some villages the floors are rised and drybut in the majority of cases they are low and damy. The dwellings are in many instances quite agart from each other, being separated by paddy-fields and waste lands. Domestic cleansing is fairly observed, but refines matter is generally collected within the premises. The cow and cattle-sheds are often close to the houses, but are not kept clean. Sometimes both men and cattle are housed under the same root. Deforcation is carried on erezywhere. The Hindu dead are remarked on banks of tanks or of the river, or on waste lands, or by the side of the canal embankment; while the hurpose, generally at a little distance from the dwellings.
Sattahatta—Bu <i>rat</i>	64,624		12:86	47.3	##	Villages are low.lying and subject to inundations. Drainage is defective, and flows into fleids, fanks and excavations.	Is taken from dirty tanks and ponds. There are very few good tanks. The supply is sufficient, but anything but good sud wholesome.	Houses are kutchs with low and damp floors, and are not close to each other. They are, however, without windows, and are therefore badly rentilated. Their surroundings are clean, but refuse and cowdune are separate and clean. No conservancy arrangements exist. Dead cattle are thrown in waste lands called engars. Defrecation is carried on everywhere. Corpses are burnt in waste lands and dead are burnt in waste lands and dead are burnt in waste lands and in their own lands.
Nandigram—Bural	121,895	10.	1676	2.65	2.70	Same as in Suttahatta thana described above	Same as in Suttahatta thana described above	Same as in Suttahatta thans described above.
Rachunath pur- Baral.	62,124		14.48	E .	85 84	Most of the bustis or villages are-situated in Is on the mid-t of fields, and only some are of comparatively raised ground. The latter are fairly well dramed, but not so the former. If The village footpaths, as a rule, serve the wipurposes of drains.	Is chieffy derived from small pends, most of which are full of decomposing vegetation, the water them being dirty and blackish. There are very few good tanks, and the want of good drinking water is severely telt in nany places. The water of the river Bagda, being brackish, is not used for drinking.	The houses are mud-walled and thatched with straw, with generally low and rather damp floors. Owing to the absence of windows the rooms are badly ventilated and are dark, and generally emit a musty odour. The courtyards are kept pretty clean, but the compounds are very dirty, house-awepluist, garbage, &c., being invariably collected in them in heaps. The cow and the cattle-shuls are generally amail and badly built, and are in close practimity to the dwelling-houses. They are often very filthy, but are in some places kept fairly places.
Egra – Bural	65,417		16.82	8.	2.23	Drainage is very defective, and generally flows into the adjacent dobas and ponds,	Is obtained from dobas and tanks. The former are, as a rule, very filthy, while the latter are open to all sorts of pollution. Scarcity of good drinking water in several places is severely felt.	The dwelling-houses are all kutchs and generally very small and ill-ventilated, with low thatched roofs and damp floors. They are in several instances quite apartron each other. The cow and cattle-sheds are generally close to them, and are dirty. The courtyards are kept fairly close, but the house surroundings are clen very fifthy. Bondsides and other convenient C-enasion is carried to by the people for defocation. C-enasion is carried on banks of tanks and khals and on waste lands.

Midnepur

			RATIC PER 1	RATIO OF DEATHS FROM.	ATHS FR POPULAT	OM -	SANITARY	SANITARY ESTIMATE OF VILLAGES IN RACH CIRCLE UNDER THE HEADS OF	R THE HEADS OF-
District.	Na.7e of Circle.	Population.	.xod-flams	Fover.	Cholera.	Bowel-com- plaints.	Drainage.	Water-supply.	Domestic cleansing.
	Kbijri-Rurat	42,126	:	25.25	8 .	1.81	Most of the bustis or rillages are situated in the midst of fields, a few only being situated on comparatively raised ground. The latter are sairly well drained, but the former are not. The village footpaths, as a rule, serve the purposes of drains.	Is taken chiefly from small ponds most of which are full of decomposing vegetation, the water in than being dirty and of a brackish colour. There are very few good tanks, and the want of good drinking-water is severely felt in many places. The water of the river Bagda, being brackish, is not used for drinking.	Same as in Raghunathpur thans described above, with this exception, that the house surroundings and the cattle-sheds are not generally very dirty.
Nidnapur	Potaspur-Rural	97,394		19:30	.64 .57	05.	West of the villages being lowiving, the drain- last from them is not free, and is roverorer much interfered with by the large number of holes and ponds with which the villages of holes and most every person having at least one pond attached to his house. There are ever bunds or low emoankments around some of the villages which retain water in the fields.	Is taken from dobas, tanks, and khals. The dobas and the tanks moetly contain dirty water, are full of gonwa weeds and other aquatic plents, and are entaminated in every possible way. Most of them dry up in the hot weather when there is a great scarcity of water.	Same as in Baghunathpur thana described above.
	Bhagbanpur—Rural	96,451		19.28	94:4	-	Same as in thans Potaspur described above	Same as in thans Potaspur described above, with this addit. n, that water-supply also taken from the river Kongsabati,	Same as in Beghunathpur thana described above.
•	Hughli—Tours	38,718	?O.	13 81	2:11	17.9	Draings on the whole is very defective. The principal outlets of the main channel are defective. The drains, after running in opposite directions from the river along a winding course, discharge themselves into it.	In all places not within easy reach of the river Hughlithe water-supply is deficient in quantity and a and of a tad quality. Only three tanks have been set apart for driving; this number is quue inadequate to meet the local requirements. On the whole the water-supply of the municipality is deficient.	Surface cleaning is imperfectly attended to owing to the weak staff at present employed for the purpose. In places the surroundings of the houses are filtry. Accumulations of rubbish in corners and at the back of houses are common. There are it public latrines and about 80 per cent. of the imbabitants are said to have privies of their own. They are regularly attended to by municipal melters, and kept fairly clean and inofensive. Promisenous deforcation is still very largely carried on. The night-soil from both public and private is daily removed and properly trenched.
Hughli	Hughli – Rural	8,427	i	15.15	7.11	6.17	The drainage flows towards fields, khals and the river Hughli.	Is taken from the river Hughli by people living in the riparian villages; those residing in the interior resort to tanks and wells for their water-supply.	Domestic cleansing is fairly well attended to, but there are no corservancy arrangements. Heaps of manure are to be found everywhere.
	Kotrug-Town	5,747		11.60	51 62 88	8. 8.	The drainage flows in a westerly direction into fields and thence into the Bally khal and Kethter khal.	Is chiefly from the river Hughli. People living in the interior, however, use tank water, which is not always good.	There are no public latrines; a few privies exist which are cleaned by meltters from Uterparah. Domestic cleansing is fairly attended to.
	Bansberiah - Toten	7,031	:	15.64	17.2	2.36	Shallow drains have been cut for drainage which flows towards the river Hughli,	People living near the river Hughli drink river water, but those living in the interior use tank water, which is not always good.	Domestic cleansing is fairly well attended to. The armunements connected with the disposal of the dead are satisfactory.
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76 The drainage is very detective. The municipal drains are cleaned, but house drains are not attended to at all, and are in a bad condition.	11'41 '29 2'01 The drainage of those villages which are situ. People living in riparian villages use river water, villages, particularly those inhabited by Mathomedana, are surrounded with junge, the growth of which is encouraged in order to protect the females more effective.	1652 • 754 1.42 Drainage is defective. (No further informalism from the rivers Hughli and Saraswati and Domestic cleansing is pretty fair. No conservancy articles in has been furnished under this head.)	1868 72 1.43 Same as in Jehanabad rural described above Same as in Jehanabad rural described above.	1875 '66 1.53 No proper drainage. The rain waters natured is chiefly from tanks the water of which is sence. The houses are neat and clean and well ventilated. No ally collect in the ponds and adjoining raily bad, as none of them is guarded against conservancy arrangements. The people resort to the fields and deforcation. Donestic cleaning is observed.	20.98 71 1.21 No proper drainage. The water from the lis taken from two large, good drinking water a spect of the villages during the rains collects in the tanks. There are shout eight pends, the water villages is clean. The houses are ill-rentisted. The proper of the proper drainages are ill-rentisted. The proper of which is used for culinary and washing purposes.	90 2:59 Drainage flows into fields and bhils Is taken from tanks and pands. The former orn. The houses are neat and clean, but ill-ventilated. No conservancy arrangements. The people resort to fields, others. Water from Kana nuddee and the gardens and jungles for defrocation.	There is no proper drainage in this thana. Is taken from tanks and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the adjoining paddy-fields and ponds. The rainwater naturally flows into the people. The people of silt, and ponds. In cleansing is fairly observed by the people. The people of silt, and the people. The people of silt, and other domestic purposes. The rainwater naturally flows into the people. The people of silt, and the people. The people of silt, and fairly and ables, &c., are to be seen in almost every rillare. People resort to fields and antia. The rainwater naturally flows into the people. The people of silt, and problem in the people. The people of silt, and other domestic purposes, and article are not fairly and other domestic purposes.	Drinage is defective; almost all the drains is found in various ways. The tank water are furthes and rather deep, and many of river is found in various ways. The tank water are furthes as well as some purce, drains are ob- is not fit for use, none of them having been profit an arised from pollution and set apart for drink. A proper system of succeeding and the filling up of the many exceeding and the filling up of the many exceptions are much needed. The town is overgrown with juncie, which the owners of are is founded in of dozes. The flow ways are for the many extend from pollution and set apart for drink. The permit the formation of the many extend from pollution and set apart for drink. The permit the filling up of the many extended. The many extended to fill the many can be included to fill the many in the filling up of the many
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86.8	11.4	16.52	18.63	18.75	\$0.03	\$1 \$6	85. 61	
			<u> </u>	<u> </u>	1	200.	!	
10,507	39,905	46,173	48,218	88,537	66,113	133,300	121,111	964,28
Jehanabad — Toum	Jehansbad—Zural	Pulbs or Bansbe-	Balagur – Raral	Dhunisk bali – Rural	Panduah - Rurel	Khanskul – Epral	Goghat—Rarad	Serampur—Tokon

•	-		RATI PBB I	RATIO OF DEATHS PROM-	OPULAIN	N	Валітавт	BANITARY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	R THE HEADS OF-
Pistrict,	Name of Circle.	Population.	Small-pox.	Ecoer.	Cholera.	Bowel-com-	Drainage.	Water-supply.	Domestic cleansing.
	Germpur – Bural	15,978		15. •		.	Drainage flows towards bhils and swamps	Is taken from the river Hughli by the people living on its banks. Feople living in the interior obt in their supply of water from tanks most of which contain bad water.	Domestic cleansing is fair. No conservancy. House-refuse and other refuse matters are accumulated in heaps in fruit and at the back of houses. Defocation is promiscuous.
•	Boidyndatti—Tour	14,718		6.11	<i>1</i> 9.	1.75	Drainage is not satisfactory. It flows westward through kurcha drains into khais at d julias, and ultima ely into the river Hughli.	In taken chiefly from the river Hughli by the people living on its banks. In the interior the people druk tank water which is not good. The want of good drinking water tanks is much felt.	Surface cleansing is fairly well attended to. There are four public latrines and two blogars looked after by seven methers and one jenuadar. Carosasse of dogs and cats are not of thrown into the irver. Night-oil is carried in latrines are most objectionably situated, viz., on the hank or edge of the river, and there is nothing to prevent the mehlers from Browing the night-soil into the river.
•	Singtur or Boidynbutti-Rural.	191,03		18:58	1.36		The drainage is defective in many places, and the villages are liable to be flooded during the rains.	Is taken from tanks and ponds, and is also used for cultuas" and washing purposes. The quality of the water is not good, as it is polluted in various was, s.	The honses are ill-ventilated. Some of the villages abound in jungles. Defocation is carried on in fields and sanders dens. No conservancy arrangements. The paths, drains and passages between the houses are in a fiethy condition.
Hughi	Utterpara—Toura	5,510	:	66.4	1.81	5.80	Dramsge is defective. Most of the drains are kitcha and require constant attention. The usin dram passes through the Mukta mullah, and cannot be kept clean.	Is taken chiefly from the riger Hughli. The Surface cleansing is not sufficiently people living at a d stance from the river drink 'count of inadquate seablishment tank water which is not good. United in filling up pits and holy buried counside of but near the town startant ponds and large excevasions the compounds of houses.	Surface cleanting is not sufficiently attended to on account of inadequate establishment. Sweepings, &c., are utilized in filling up pits and hollows. Night-soil is buried outside of but near the town. There are many stegment ponds and large excessions. The dead are burned in the compounds of houses.
	Haripal—Bural	84,933	1	12.53	1.42	1.80	Drainage flows into bhils and swamps. It is defective.	Is taken from tanks which are used promiscuously, and are more or less polluted. It is also taken from rivers where they run, but the dead are thrown mot them. Tanks situated outside of villages generally contain potable water. In villages away from rivers the water-supply is insufficient.	The spaces between the bouses abound in superfluous vectorion. The rilages, particularly those inhabited by Mahomedana, are surrounded with jungle, the growth of which is encouraged in order to protect the females more effectually from public view.
	Chunditola—Eural	84,887		8.73	98.	1.67	No proper drainage. During the rains the wasers naturally flow to the Saraswati river.	Is taken from tanke. There are many tanks and ponds, but the water of the latter is only used for washing and cultuary purposes.	The houses of the Hindus are properly ventilated, but those of the Manomedans are not very clean. No evuserance arrangements. People defects in fields and gardens.
- ,	Krishnsgore—Rural	55,107		12.39	និ	28.33	Drainage flows into fields, bhils and swamps. It is geneially defective.	Is taken from the rivers Kana and Damodar and tayles. The quality of the water is on the whose	Domestic cleansing is prefty fairly attended to, · No con- servancy arrangements.

satis- rmed, is 'are omis- omis- ilition I the ition,	ublic ed to ecate	S in	ople.	There id tank	con- con- con- con- con- con- con-	con-	EApp. v.
The conserrancy arrangements are on the whole astis. Rectory, Surface cleaning is efficiently performed, engight in busiess. The public latrines and urinals are insufficient in number, and the southern portion of the town is without any of these conveniences. Promise usual detocration is still carried on. There are numerous hollows containing starnant water. The condition of the municipal market is unsatisfactory, and the numerous private ones are kept in a filthy condition. A scheme for the removal of night-soil by tramway is under consideration.	Surface cleaning is attended to. There is one public latriue, but it is kept dury, and jungle is allowed to grow just outside, and people sometimes defocate outside. The night-soil is removed and buried outside municipal limit.	Domestic cleanliness is pretty fairly attended to, No con-errancy arrangements. The people deforcate in fields and gardens,	Domestic cleansing is more or less obserred by the people. No conservancy. Defectation is carried on in jungles and fields.	Domestic cleansing is pretty fairly attended to. There are no conservancy arrangements, and the road and tank aides are thickly covered with human excreta.	The spaces between the houses abound in superfluous vegetation. The paths and drains are in a fifthy condition. The villages, particularly those inhabited by abhomedname, are surrounded with jungles, the growth of which is encouranced in order to protect the females more effectually from public view.	Domestic cleansing is more or less observed. No construct arrangements. The people defocate in fields	No conservancy arrangements. The people deforate in fields and gardens.
The co factor factor factor factor factor for the form fo				<u> </u>	6.	Domestic clearstrancy arrang and gardens.	
Is taken from the river Hughli and tanks. The water from these sources has been condemned and a scheme for a filtered water-supply is under consideration.	Is chieffy taken from the river Hughli, but tank water is drunk in the interior of Bellour. There are no good tanks.	Is taken from tanks and rivers. There are nu- merous tanks and ponds, but their water is not good.	Canal water is larrely used by people in its immediate vicinity. There are bthers, particularly the low class people, who freely use the water of a deep pit dug out to procure earth for buil ing and manifilm purposes; the water of this pit is extremely unwholesome.	Is taken from tanks an the Kana nudi, the water of the former is, with a very few exceptions, not fit to drink,	Is taken from tanks which are used promiscuously and are more or less polluted. Water is also dawn from rivers where they run, but the dead are thrown into them. Tank situated outside of rillages generally contain drinkable water, but in villages away from rivers the water-supply is insufficient.	is taken from tanks and the rivers Damodar and Rupnarayan, the water of the former is not good.	Is taken from tanks which are used promiscrous- ly and are more or less polluted. Also from rivers where they run, but dead bodies are occa- sionally thrown into the rivers.
Drainage is on the whole defective, and in one part of the town the same set of drains convey both sewage and storm water into the river Burchi at King's Road, south of the Bat Golaba. The discharge from the gas-works finds its way into the drains.	Drainage is defective. It should be improved, especially in the low bustees on the station road. The drainage flows into the Bali khal in the north and into the western fields and railway cuttings on the south and west.	Drainage is not free. The water during the rains flow in to ponds, and the river Saraswali,	Most of the villages in this thans are situated on elevated ground, and the drainage from them, as well as that from, the villages situated on the canks of khals shu the river Hughli, is fair. Bhils and swamps abound in this thans.	Drainage is defective and not free	Drainage is defective	No proper drainage. The waters during the rains flow into the ponds and fields.	The drainage of villages situated on raised ground is free, but that of villages situated on low land 12 very defective.
*** ***	. 8	5.22	 	88	- 12.8 	3.61	9.5
20	3:17	1.75	8.	1.4	Š.	56. 57.	2.70
19.19	96.9	10.11	11.05	เเรเ	11.03	89.6	10.55
e3.	• .						
818'98	14,815	128,477	81,345	77,539	109,968	68,563	68,861
Новган-Товя	Bali-Town	Dumjoor including Sankral	Olaberish — Rural	Jagatballabhpur – Rural	Amta-Rural	Bagnan Bural	Sysmpur—Rurol

	Domestic cleansing.	The work connected with surface cleansing and general conservancy is carried on the town is not on the whole d unsatisationity, and the town is not on the whole in the cleanly condition desirable. There are 46 latrines, but only three of them are free to the prople, a fee is levied for the use of the rest. The bursate privies are also under the care of the contractor, and private latrines are find hoth the public and instances are not rare in which both make bublic and private latrines are fills and beding manasco. The private latrines are fills been effected in the busitees, there much improvement his been effected in the busitees, there are still several which are deflicited in the busiters, quinements, fills shounding everywhere. Of the busiters, those in which catile are kept are the worst. Here those in which catile are kept are the worst. Here there in which catile are kept are the worst in heaps festering under a hot sun. The burial arrangements are very unsatisfactory.	Domestic cleanliness is observed throughout the town. Most of the habitations wear a neat, clean and comfortable appearance.	No conservancy arrangements. The people deferente wherever they like, Sweepings, and house refuse are collected in heaps in front and at the backs of houses.	Surface cleansing is attended to, but not sufficiently owing to the inadequates establishment. There are no public latrines. Deferention is promiscuous.	Surface cleansing is fairly well attended to. There are two public lightmea. The night-soil is removed and buried in a trenching ground. More public latriues are required—one at Moniampar, me at Nowabgan, and one at Garnila, in order to keep the river bank, where deforcation is carried on to a great eatent, free and pure.	Domestic cleaning is pretty good. No conservancy arrangements.
ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	Water-supply.	Is on the whole very unsatisfactory. It is taken if from the river Hughli, Tolly's nullsh and tanks. The tanks in the internor beforaring to private individuals are kept clean, but those in the densely populated practions of the town are highly polluted and very filthy. Europeans and well-to-do natives who can afford to play for it, obtain their water-supply from the Calcutt by drawing it is contemplated to extend the Calcutta water-works wheme into those parts of the Suburbs which are proposed to be analgamated with the Calcutta Municipality.	Is taken from sanks. There are five good tanks, but many others which are foul and overgrown with weeds and rank vegetation. The water of Tolys Rulls and Kaorapooker khal is also drunk. The former is considerably fouled. The water-supply is insufficient.	Is taken from tanks most of which are filthy, and the water of some of them is said to be almost black.	Is good in the riparian wards, but it is not good in the rural villages Ghola, Natagore, Bohora and Nona Chudunpooker.	It should be Is taken from tanks and the river Hughli. he district road There are many tanks with pucca ghâts, but no Nowaparah, their water is not good.	is taken from the river Hughli and tanks. The quality of the water is, on the whole bed.
SANIARY ESTINATE	Drainsge.	The drainage is very defective, and whatever is has been dunder. The has been dunder that been during the victor of drains consist of excavations on the sides of the roads. They run anywhere and selve the first in discharge into certain main drains which lead either to Dispus, the Baischarge lead either to Dispus, the Baischarge and, jills or the river; but they do not set during the rains, and submerge the first act during the rains, and submerge the first of the drains require constant attentions and alternate a special establishment is entertained for this purpose, they are often neglected; a feet of aurilace drains is urgently called	ane drainage is pretty free. No lodgment of starnant or putrid water in any of the drains is to be seen.	Drainage is defective. The drains are improperly levelled and the sewage of some flows into ponds, the water of which is used for culinary purposes.	Drainage is fair. The Khurdah and Titagur khals carry off the drainage to the river. In Natagure and Rohora the drainage chiefly flows in to the fields and tanks.	Drainage is very defective. It should be improved, especially along the district, road and in parts of Garulis and Nowaparah, Ichapur and Nowabgani.	1.01 Drainage is defective
18	Bowel-com- plaints.	1 a a	3	\$.1	09.50	88.8	1.0
RATIO OF DEATHS FROM-	Cholera.	6.03	91 91	- Fr	88	01.3	8.1
OF DEAT	тычыт.	19:01	9.9	12.03	13.01	14.03	97-21
RATIO PER 1,	.xoq-Ilam8	89		\$	•2	•6	
	Population.	251,439	51,658	67,798	22,739	18,018	21,660
	Name of Circle	Suburbs of Calcutta	South Suburban— Teern.	Tollyganj—Karal	Augurpars or South Barrackpore—Tearn	Nowabrani or North Barrackpore-Toura.	Barrackpore including cantonment - Raral.
	Dist "i t.	•	,	- Pergunaha			

The conservancy arrangements are defective. There is only one cart for the removal of refuse, and so surface cleaning is not efficiently done. There is only one public latrine, the night-soil of which is said to be bursed in a chur.	No conservancy arrangements. The villages are riddled with hollows and excavations full of filth and stagnent water. In imany villages the dead are interred near houses.	Surface cleansing is attended to, and the street sweep- ings, &c., are deposited in appointed playes, and in pits and hollows. The burfis belonging to the jute mills are in a flithy and insanitary condition. There are 10 public latrines, but they belong to private in viduals. The private privies are under municipal man- agement. The night-soil is trenched.	Surface cleansing is attended to. No public latrines. There are several private privies in Rajpur and Harinayi, but the night-soil from them is never removed, as Parl IX of the Municipal Act, III of 1834, is not in force. There is a burning ghat in each ward for the cremation of the dead.	Domestic cleansing is fairly well attended to. No conservancy arrangements.	Surface cleansing is not attended to, as there are no scavenger's carts. At present there is only one public latrine in Naihatti on the south of the Naihatti ferry ghat, Defectation is promiscuous.	No conservancy arrangements. Defoceation is carried on in fields, gardens, banks of rivers, and in jungles.	Surface cleansing is attended to, but not efficiently for want of proper establishment. There is no public latrine in the bazar, where over 200 permanent shaps exist, and where over 20,000 people assemble on hat days.	The dwellings are hadly constructed, and as a rule are deroid of ventiation. The floors of the dwellings are generally kutcha, but are kept clean by smearing from almost every morning with earth and cowdung.
Is taken from tanks, the water of which is not fit to drink, as the tanks are not protected from pollution. River water is largely used,	Is chiefly from the rivers Jaboona and Biddia-dhurres and tanks which are full of weeds and very filthy. Most of the tanks dry up in April and May.	Is taken from the river Hughlı and from tanks, It is abundant and fairly good,	All the wards have numerous tanks with pretty good water except the eastern part of the Kodalis, near the Changripotta railway station. There are no numicinal tanks, and none of the private tanks are specially reserved for drinking. Some of them might be so reserved with benefit.	Is taken from tanks which contain pretty good water.	The people living near the river Hughli drink its water, but those far away draw their waters supply from tanks the water of which is not good.	Is taken from the river Suti and from tanks. The river, however, has silted up and contains starnant water, which is full of decomposing weeds. In some places certain portions of the river have been converted into tanks by embankments placed across. Most of the tanks are old and shallow, and dry up in April and May.	Is from the river Jaboons and tanks, Supply abundant and quality tair. But the river is polinted by sweepings and garbage from the hat being thrown into it and people defocating on its bank.	The inhabitants of the rillages which are situated on the banks of the Itchamuty river resor to their water-supply, but the others have to depend on beels, baors, and dirty shallow tanks full of weeds. In the baors jute is steeped,
The drainage is defective	There is an entire absence of drainage	Drainage is now pretty good, but there is still room for much improvement. A survey has been made and levels taken.	The drainage is good except in Bamunpara, where there are noproperdrains; there is a deep most here called Dushanes 9 Gurh which interferes with the drainage.	Drainage is almost absent in the villages, and what little there is is defective.	The drainage is good with the exception of Shamungur and Halishohur wards, where it should be promoted by levelling and cutting drains to join the big drains in Halishohur.	Drainage is defective	Baduria and the riverside villages are drained into the river Jahona and Mokator khat; the drainage of other villages flows into beels. Drainage is on the whole fair.	Drainage is defective '
#	ž.	61.3	2.28	₹.	5	88	Ţċ.	ż
1.32	ਨ ਵੇਰ	99 60	2	2.16	38.	1.10	Ø)	S F.
6.11	ଞ୍ଜ ନି	10 43	13.33	20.37	11.81	21.10	.136 19	21.50
ż						1		609.
29,450	55,887	88° &	10,576	31,538	21,533	55, 429	19,135	104,606
Bussirhat—Tour	Bussirhat—Rural	North Suburban town or Buransgore.	Rajpur— <i>Town</i>	Sonarpur-Rural	Naihatti—Town	Naihattı—Rural	Baduria—Toun	Baduris – Kura!

			RATIO PER 1,0	RATIO OF DEATHS PROM- PER 1,000 OF POPULATION.	THS PRO	.¥.− 10.8.	SANITARY ESTIMATE OF VILLACES IN EACH CIRCLE UNDER THE HEADS OF-	ER THE READS OF-
triêt.	Name of Ortcle.	Population.	Smæll-pox.	Fever.	Cholera.	Bowel-com- gaining.	Drainage. Water-supply.	Domestic cleansing.
	Dum-Dum-Rural	81,578		18.35	हीं हों हेंगे	8	Drainage is defective The people take their drinking water from the Suti river and from tanks. The river has silted up and contains stagman water, which is full of decomposing weeds and leaves from hamboo jungle along the banks. Most of the tanks are old and shallow, and dry up in April and May. The water of some is green in Pebruary.	he No conservancy arrangements. Domestic cleansing is ed spretty fairly attended to. Deforcation is carried on in of fields and gardens.
	Baraset - Rural	78,181	;	1875	'n	ş	'39 Same as in Dum-Dum thans Same as in Dum.Dom thans	Same as in Dum.Dum thana.
	Hosnabad and Takee	7,72 1,22 1,22 1,22 1,23 1,23 1,23 1,23 1,2		16.79	73 56 40	£.	9. Drainage is defective Is taken from the river Itchamutty and from tanks. The water of the river is fit for drunking only in whiter, as it becomes brackish in the hot and rang seasons. There are, however, a few good tank; here and there. In some rillages the people take to bring their drunking water from a distance of 7 or 8 miles. Water-supply on the whole very defective.	om The dwelling-houses are ill-ventilated; their floors are ing generally kutcha, but are kept clean by smearing them hot almost every morning with earth and cowdung. ges ges ply
equa	Barrispur—Rural	75,830	1	16.95	1.50	&	Villages are situated on high ground and Is taken from tanks and ponds, some of which are surrounded by fields. The natural draininged fine in the hot season. Very few of them are is good and flows into fields, but the road-kept clean, and most of them are full of weeds side drains are obstructed and full of jungle and aquatic plants.	are In some rillages the houses are crowded together. No see conservancy arrangements exist. Pathways, waste lands, and jungles are used as latrines. Dirty pits and excavations exist. Cremation is carried on in the burning ghat, which is kept very dirty. Mahomodans intertheir dead in the compounds of their houses.
	Diamond Harbour— Bural.	52,823	8	13.48	8.78	1.69	Some of the villages are on high and some on water-supply is taken from tanks only. The low ground. Drainage flows into the fields water of some of the tanks is good; others are and khals.	The Most of the houses are kutchs and like huts. No conserare of tanks are full of human excrets. Defocation is promiseous. Excavations containing fifthy water abound. Hindus cremate their dead on the banks of the river Hughli.
	Bistupar— <i>Rural</i>	נוז,וז		12.03	97.3	P 39	Some of the villages are situated on elevated rate-supply is chieffy obtained from tanks, khale, ground and some are low-lying and surremed and their feely swampy proder-fields. Drainage from the former is to some extent free, but that from the latter is more or less defective.	the houses mostly consist of mud walls with roofs that clean, but the surroundings of the houses are often filtry. Defecation's carried on at convenient places during the dry season, but the sides of tanks and roads and high grounds are recorted to for the purpose during the rains, when the fields are under water. The Hindus burn their dead on banks of tanks and khals, and on waste hands, but the Mahomedan dead are usually buried in private lands near their houses.

		*								-	•
Personal cleanliness is observed by the people generally. The houses are nest and tidy, but ill-centificted, and their surroundings are filthy. No conservancy arrange, ments exist. The sweepings and house and cow-shed refuse are heaped near houses until wanted for manure. Defectation takes place on the sides of khals and everywhere. The dead are often interred in and near houses.	Domestic cleansing almost the same as n Habra thana, with this exception that cremston is carried on on banks of tanks and khals and on waste lands.	With few exceptions the houses are kutchs and consist of mind walls with small holes in many instances for ventilation. The roofs are thatched with straw. House surroundings are often very filthy. No cuservancy arrangements exist. The Hindus generally crusty their dead to the banks of Huchli for cremation, while the Mahomedan dead are usually buried close to their houses.	Bouses are made of mud walls and thatched with straw and are not provided with sufficient windows. They are surrounded by fields. There is much dense jungle in the country which gives shelter to tigers. No conservancy arrangements exist. Defrecation is carried on anywhere. Jute is extensively steeped in the road-side cuttings. Pits, hollows and excavations containing fifthy water abound.				•				
Water-supply is obtained from tanks, khals, and and creeks. The tanks are mostly small, and are covered with weeds and pannas, and are polluted by bething, washing clothes, cattle, &c. The water of khals and creeks is generally brackish.	Water-supply almost the same as in Habra thana. Scarcity of water is felt in some places in April and May, when the Pudma nuddi dries up.	Water-supply is obtained from tanks, bhils, khals, Pudma nuddi, and the river Janna. The tanks are mostly covered with weeds and sedges, and are open to all sorts of pollution.	Water-supply is taken from tanks, most of which are full of weeds and contain decomposing vege-tation with branches of trees overhanging them.					these thanss are not yet available.			
Most of the villages are low-lying and are surrounded by swampy tracts of rice cultivation. Drainage from them is extremely defective. Many villages become water logged during the rains.	Drainage almost the same as in Habra thana described below.	Drainage is fairly effected from the villages that are situated on banks of rivers and khals. Most of the villages are, however, low-tying, and in them the drainage is very defective, being much interfered with by pits and hollows.	The country is full of swamps and khals, and numerous pits, hollows, and excavations which receive the dramage.					Particulars regarding the sanitary condition of these thanas are not yet available.			
Ş.	88	6,	61		, 2 5	69.3	, 8 8	3	82.6	18.	11.
80.08	좌.8	1.82	474	ę.	9:50	ŝ	8.8	16.4	(2.2	27.9	6.48
18.21	25.17	19.73	17.16	Not available	12.43	13.67	13.21	15.42	11.36	11:21	17.10
	į	10.	80.	Not	1	:	i	:	;	600.	1
78,952	53,516	75,429	49,292		76,140	62,536	47,518	90,319	48,455	107,275	50,453
Bhangor—Rural	Deyrunga — Rural	Набга—Янга!	Harwa Bural	Joynagur—Town	Joynagur—Bural	Atchipur—Rural	Canning—Reral	Sufempur or Kulpi Rural.	Devipur—Rural	Bankipur—Rural	Mathurapur—Rural

 - -		- - 	RATIO PER 1	OF DEA	RATIO OF DEATHS FROM-	1 %	Sanilaby	SANITARY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	R THE HFADS OF-
District.	Name of Circle.	Population.	Small-por.	Fever.	Cholora.	Bowel-com-	Drainage.	Water-supply.	Domestic cleansne.
	Krishnaghur – Toum	27.47		- 1	- 25	æ	The general drainage is imperfect, water Is not sufficient. Deline detained in holes and depressions, Jalang, 31 shull instead of being carried away. All the wells are	Is not stifficient. It is taken from the river Jalangi, 51 tanks, and 27 puces wells. Three tanks have been set apart for drinking purposes. All the wells are protected,	Domestic cleansing unsatisfactory, rubbish not being brought out for removal and collected here and there in heaps in corners. There are 17 public latrines, the night-coll from which is deally removed and buried in trenching grounds. Defocation is carried on on the banks of tanks and lowlands and in disins, &c.
	Kishneghur—Bura.	77,897		21.to	1.61	à	Drainage is to river, bhils, and khals. The rilages are flooded more or less daring the rains.	Is taken from the river salangi and Hughli bhils, tanks and wells.	Houses are kutcha and pucca, and kept fairly clean, No conservancy.
	Santipur—Tours	20,687		03.6	13	-	Drainage is defective. It should be improved by constructing more purca drains with proper lails. A good beginning has, however, been made.	The people drink river water as a rule from Baur and Hurypore khal and Nyger, but people residing far away use tank water.	Surface clearsing is fairly well attended to. No public latrines. Well-privies abound. Defocation is, carried on promiscatously.
Nuddes	Santipur—Burel	24,177	i	27 09	Ē	67	Drainage is pretty fair, and there is a long joi. which serves the purposes of a drain.	Is taken from rivers and tanks. Most of the tanks are in a bad state of sanitation with panagrass and weeds. The quality of the water on the whole is very bad.	of the The dwellings are badly constructed without proper th pans ventiation. The floors of dwellings are generally kept after on clean by smearing them every morning with earth and cowdung. In the main pathways accumulations of rubbish, &c., are to be seen.
•	Kushtes.— Tours	711,6		25.	S.	<u>8</u>	Drainage is defective. Kushtea being high is not the river are fushed hack by flood water which passes through and submerges low lands force passing into the fleds. There are four or five such drains, and one is large and passes through Arowpara and Jollagara khal, which has been blocked by the railway line, and the drain directed south onto kucherry. The drainage should be improved by representing to the railway officials the blocks made by them.	is taken chieffy from the river Gorai. Water collected by means of dams is also used, but as cattle are washed in it, it is not fit for drinking.	Surface cleansing is not attended to. There is one public latrine and about 225 private privies, the night-oil of which is removed and buried in the municipal trenching ground.
	Kushtea Bural	17,728		24.82	21.		The drainage is pretty fair, and there is a long jole which serves the purposes of a drain.	Is obtained from river, bhils and tanks. The bhils contain good water. The tanks with the exception of a few, are in a had condition, unprotected from surface drainage, muddy and tull of pana and decaying regeration.	The houses are crowded together in several villages. They are kept tolerably clean, and their floors are free from damp; but ruobish, lifter and other reduse are secumelased in the main pathways. Bambuo clumps and much jungle and rank regetation abound.
_	Ransghal Toum	8,683		4.56	=======================================	\$	Drainage is defective	The water-supply is abundant in quantity and fair in quality. The river Churni is the principal source. Tanks supply water to the villages in the interior. There are three municipal tanks, but none of them is reserved for drinking.	Surface cleansing is attended to. There are no public latrines, but privies of the worst kind, viz. well-privies, abound, which are never cleaned. The people deforcate on the read-ides and jungle for want of public latrines, and thus pollute the air and soil.

						[App. v.
The houses are free from ground idamp. Domestic cleaning is regulated by the social status of the people, but the houses of the Gowallas and Moochis are generally uncleon. The Mahomedans also do not, as a rule, care for conservancy or cleanliness. In several rule, care for conservancy or cleanliness. In several archimages aveepings and other refuse are thrown and accumulated on the pathways and passages. Deforcation around dwellings and in the beds and on the banks of rivers is common.	The town is surrounded with jungle, particularly in Shaitpara. No arrangements have been made for surface cleansings, and yet the roads are free from filth because the inhabitants have been made to throw all the house-refine, &c., fitto the hollows within their premises. There are no public latrines.	In general the houses are constructed of the urual 'materials, but those on the borders of the rivers are built of frail and inflatumable materials. Jungle abounds in many villages, though much of it has been cleared by the indize planters. Domestic cleaning is somewhat better cared for than is generally the case in rural villages. Sweppings and retues are utilined in filling up hollows in the homesteads, and consequently unhealthy excavations are comparatively few in this thans.	Surface cleansing is attended to. Sweepings and other retuse are used for filling up pits. There are no public latrines, but temporary latrines are opened during the mela time. There are four melas or fairs held in Novodip at different seasons. The well-to-do people have well-privies which have not been cleaned for years. The poor resort to waste lands and jungles for defencation.	The houses are scattered. The floors of the houses are very damp, and domestic cleansing is very little attended to.	The arrangements under this head are very bad. There are no public latrines. The well-to-do have well-privies, some of which are full to the brim. The majority of the people resort for deforcation to the fields, gardens, waste lands, sides of tanks, and khals, &c.	The houses are not crowded together, but are ill ventilated. They and their surroundings are kept in a filthy condition, Junde abounds in saver kept in a filthy convancy is little cared for. Sweepings and other refuse lie about,
Is generally taken, from tanks and bhils. The tanks are covered with pans (pistic stratiores) and other weeds, and are contaminated by washing of clothes and cattle, by refuse thrown on their sides, by deforeation around and about them, and in other ways.	Is taken from the river Bhyrub, one municipal tank, and four or five private tanks and wells. The municipal tank is surrounded by a raised mound, and a watch is set over it to protect it from pollution; but the other tanks are full of decomposing vegetation, and their water is bad.	Is taken from the Bbyrub, Howli and Khoria rivers, and from bhils, khals, and dohas. There are very few tauks. The Bhyrub is coveredwith patikochari, patashvoli and other vesetation. Aevertheless its water is clean and wholesome.	The people drink the Bhagirutti river or khal water where they can get it. Those far away from the river use tank water. When the river recedes and the khal dries up, the people use well water for all domestic purposes.	Is had from the rivers Pudma and Gorsi and from bhils, doloss, and wells. Tanks are rare.	Is taken from the river Hughli in riparian villages, and from tanks and wells in the rost. There is one municipal tank near the bazar; water fair. There are several choked up and dirty tanks and ponds the water of which is adequate in quantity, but bad in quality.	Is taken from the rivers Highli bhils, khals, and tanks. The tanks are covered with pana and other weed, and are contaminated by washing of clothes and cattle, by refuse thrown on their sides by deferention around and about them, and in other ways.
There are no drains. The ditches are obstructed by sweepings and other refuse.	Only the roads are provided with culverts and lwaterways. There are, however, knoths, shallow surface channels, but they are obstructed near houses.	The natural drainage is pretty free, and its outfall is into the Bhyrnb and Khora rivers, but many villages get water-logged during the rains.	Drainage is very defective, the place being surrounded by an embankment unprovided with sluice cates. There is no means of discharging any excess of rain-water into the river or Poltar khal.	The natural drainage is defective, the ground slope towards the rivers being insufficient. There are no side-drains to the roads, and several villages are water-logged.	Drainage of the willages on the river bank flows into the river and that of the villages in the interior into fields and Ukoondo bhil. Holes and excavations and and interfere with the drainage of the town.	The natural dramage is not sufficiently free, and there are no drains by the sides of the teads.
	E .		· .	15.		17
8 .1			?	1.79	ej	<u> </u>
54.41	13.61	æ. 83	6.03	15.78	Not available	:3 :3
,			i .		Noi	25
75,73	6,731	63,964	14,105	742,899		16919
Ransghat Bural	Meherpur—Town	Meherput — Bural	Notodip—Tour	Kumarkhali-Rural	Chagdah— <i>Toum</i>	Chagtah—Rura!

B THE HEADS OF-	Domestic cleansing.	Domestic cleansing is more or less obserred by the pecp.c. No conservancy arrangements. Road sides, fields, and waste lands are resorted to for deforation.	No conservancy arrangements. Domestic cleansing is not cared for. Defectation in and about some vilneges is common. Cowdung is heaped up or kept in pits, emitting a disgusting odour. Jute is steeped in hollows and tanks in the midst of habitations. In some villages dead bodies are buried in dwelling-houses.	Conserrancy is not satisfactory. The people resort for deforcation to fields and waste lands, but away from habitations. The dead are buried in the compounds of houses.	Some of the villages are open and free, but many are surrounded with jungle and hamboo clumps. In some rank vectation and stannut water holes abound. House-sweepings, refuse, &c., are accumulated. Here and there covering is used for fuel. The Gowalla bustis are very filtry. The pauper dead are generally thrown into the river Chernb.	The houses are scattered and widely apart from each other, and many are enclosed with hedges. Domestic cleansing is, with few exceptions, fairly well aftended to, but household retuse is not properly disposed of, Hollows, containing regetable, animal impurities and met with.	The bonses are not crowded together, but are defective in internal ventilation. They and their surroundings are kept in a fitthy condition. Jungle abounds in many villages. Conservancy is little cared for.	The honses are not erowded together, but are ill-westilated. They and their surroundings are kept in a fithy condition, Jungle abounds in sevent villages. Conservancy is little cared for. Cespits, emitting unpleasant odours, about,
SANITARY ESTIMATE OF VILLAGES IN RACH CIRCLE UNDER THE HEADS OF-	Water-supply.	Is taken from the river Joboons, bhils, and tanks. The quality of the water is not good. A great, scartly of waker is sometimes felt in many villages.	Is taken from wells and tanks. Some difficulty is felt in summer, when the tanks dry up. Vulgeges on the banks of the rivers, khals, or bhils obtain their water-kupply from them. The banks of rivers are used as latrines; the bhils dry up causing scarcity of water; and the wells are contaminated by surface pollution.	Is taken from tanks, some of which are in a had condition, and from streams. In some villaces there are ponds which dry up in summer when wells are dug.	Istaken from streams, tanks, wells, khals, and bhils. Me so of the tanks are shallow, alted up, covered with rank vecetation, and their banks are used for deforation; some dry up in the hot weather. The wells and bhils contain good water, but some of the latter are polluted with weeds. Some of the khals have silted up.	Is taken from the rivers Ichanutty and Churni, and from bhils and khals. Tanks are very fare.	Is taken from the Khoria river and from bhils, khals, and tanks. The rivers and khals are polluted by deferention. Most of the tanks have silted up.	Is obtained from the river Bhagfruthi, and from bhile, khale, baors, and tanks. The bhile and tanks are covered with weeds and regetation, and is to have alted up, and most of them dry up in summer.
SANITARY	Drainsge.	The drainage flows into thile and khale. The villages are flooded when there is an unusual quantity of rain.	Natural drainage is defective, and conse- quently surface water cannot be carried off quickly and lies stagnaut, and soaks into the sect about the hour s.	ome of the villages are on high ground; some level with the surrounding ground; some are surrounded by stagmant bhits and astampas. Natural dramage as defective, and consequently surface water cannot be carried off sufficiently, and hes stagmant, and soaks into the soil about the houses.	Some of the villages are situated on high and some on low land. Drainages is pretty free on the whole,	The villages are situated on a low level, and are consequently liable to floods. Many of the villages are badly drained. The embankman of the Kuli khal obstructs the drainage of the villages in its neighbourhood.	The villages are situated on a low level, and are therefore subject to floods. The drainage is defective, the ground having no slope for the carrying off of storm-water.	Drainage is pretty free. The outfall is into the Gapges.
BOM-	Bowel-com-	13	왉	<u> </u>	60.			10.
BATIO OF DEATHS FROM-	Сћојета.	96.1	82	1:43	7.1	9:27	1.07	<u></u>
10 0F 1	Pevor.	51 .87	19.75	20 11	16.17	17.54	87.83	19 25
RAT PER	Small-pox.		i	Į .				i
	Population.	34,306	91,818	45,340	32,701	80,509	59,763	64, 192
	Name of Circle,	Jaguli – Rural	Chuadanga—Rural	Hanskhall – Rural	Kishenganj - <i>Raral</i>	Chapra - Bural	Nakasipara – Rurol	Kaliganj – Rural
•	District,				: ,	manufacture description according		

			•				fwhh. A
Domestic cleansing is determined by the caste and habita of the people. There are many hollows and ditches surrounded with bumboes and several of them contain focus. The bustis generally and the roads are similarly defied.	In general the houses are constructed of the usual materials; but those on the borders of the rivers are built of fruil and inflammable materials. Domestic cleansing is somewhat better cared for than is generally the case in runal villages. The sweepings and refuse are utilised in filling up hollows.	The bouses are n:t crowded together, but are deficient in internal ventilation. Their floors and walls, which are leeped with earth, are damp. Jungle exists in the villages along the Bhyrab river.	The river Matabhanga and Ganges and bhils Domestic cleansing is pretty good. No conservancy.	No roads. Sweepings and house-refuse are grathered in front of houses, Jungle abounds in many villages,	No reads. Covered with jungles of bamboo and other rank vegetation. Burials take place in the precincts of dwelling-houses.	The houses are crowded together in several villages. They are kept tolerably clean, and their floors are free from damp, but rubbish, litter and other refuse are accumulated in the main pathways.	The houses are built widely apart from each other, and their floors are not damp. The villages are, with lew exceptions, pretty free from jungle, but bamboo clumps are plentiful in the villages along the Howii river. Heaps of sweepings and refuse are to be met with. Defectation on the pathways, passages, the sides of ranks, and in the dry bed of the river Howii is common. On the whole, however, domestic cleansing is fairly well attended to.
Is taken from the Bhyrub and Khoria rivers, and the Peerpur and Abrah bhils. Wells are few and tanks rare. The bhils dryup in the spring. The water in hollows is also used for drinking purposes.	Is obtained chiefly from the Bhyrub, the Hogna- gun khal, the Dhankhali bhil, which is the tail end of Bhyrub, the Chatla bhil, and joles. Tanks and wells are very rare. The bhils and khals have alted up, and are covered with regetation, and the joles are filthy.	Is taken from the rivers Bhyrub, Ichamutty, and Bowli, and from dobas and tanks. The tanks are very few, and are polluted in many ways. The Bhyrub and Ichamutty have silted up to a great eitent, and the banks of the former are used as a public latrine.	The river Matabhanga and Ganges and bhils with tanks and wells supply drinking-water.	if the villages on elevated isnd is! Is taken from tanks and railway excavations, the but those situated on either side water of which is very unwholesome, road is being obstructed by it.	Is obtained from rivers Gorai, Kaligunga and Daoka nadi and tanks.	Is taken from the river Bhariruthi, Nijhone khal, the Khalashis, bhil and tanks, which are nurerous. The khal is full of (al grass and moss, The bhil contains good water,	Is taken from the river Howli, the Bhantrye nuddi, Chahla bhil and from tanks. There are only a few wells. The nuddi having no cornection with any water-course, is rapidly polluted, and its water becomes unwholesome during the dry season. The bhil is rendered unwholesome from decomposing regetation. The tanks hare silked up and are covered with moss, weeds and other vegetation.
The houses are, as a rule, built on raised ground, the natural drainage is therefore good.	This thans is situated on a low level, and is therefore subject to floods.	The natural drainage, which flows into the Bhyrub river and a joie, is pretty free, but some villages are water-logged.	Drainage flows into rivers and bhils	Drainage of the villages on elevated land is pretty free, but those situated on either side of the rail road is being obstructed by it.	Drainare is free in some villages, but it is defective in the rest.	The drainage is pretty free	Drainage is tolerably free on the whole; but Ailhoria, Goraldanca, and Sindurakoti are not well-drained, and many villaces are water-logged, especially the chur villages.
.01	Į.	1.04	ş	60.	÷	49.	
		06.	***	8f.23	80.9		22.
20.12	\$0.9 g	94. 83.	S. S.	24.52	\$1.33 	60.02	\$. \$1
	600	#		200.	.0.		
89,160	102,754	74,955	74,178	136,713	41,939	69,184	89,947
Tehsits—Rural	Kareempur – Bural	Gangui— <i>Esral</i>	Dowlut pur – Zural	Nowhers-Rural	Bhaluka—Rural	Bhadulis—Rural	Alamdanga— <i>Bural</i>

		are deficient overbanking t vegetation, the gowalla There is no old sweeping, here or accu-	unt they are clumps, over- d, and rank not properly nvariably the removal r, which are rays. Delca- rays. Hich are	are deficient e, except at added to. De- dumps on the columns at	by the people, properly dis. properly dis. the not sufficies are kept	. No conser- e in jungles, I other refuse lage accumu-
R THE HEADS OF-	Domestic cleansing.	The houses are not crowded together, but are deficient in internal ventilation. Bamboo clumps, overhanging hollows and pathways, abound, and rank vegetation, inauriant from excessive rainfall, is common. Busticansing is not properly attended to, and the gowallabustis are invariably the most filthy. There is no arrangement for the removal of heusehold sweeping, refuse and litter, which are thrown anywhere or accumulated on pathways.	The houses are not crowded together. but they are wanting in interior ventilation. Bambro clumps, over-hanging hollows and pathways, abound, and rank vesteation is common. Busti cleansing is not properly attended to, and the gowalls bustis are invariably the most filthy. There is no arrangement for the removal of household sweepings, refuse and litter, which are thrown anywhere or accumulated on pathways. Defocation is carried on on the public pathways, which are also bestrewn with cattle bones.	The houses are not crowded together, but are deficient in internal rentilation. Jungle is rare, except at Bajirdia. Domestic cleansing is fairly attended to. Defication is carried on in the village passes, on the Rammargar road, and amidst the bamboo dumps at DebatiThe mode of keeping cattle generally is objectionable.	Domestic cleansing is fairly well attended to by the people, Street sweepings are daily removed and properly disposed of but the fluid yeahes is not similarly treated. There are 11 public latrines, but they are not sufficient. These and some of the private privies are kept clean by the municipal meliters.	Domestic cleansing is more or less observed. No conservancy arrangements. The people deforate in jungles, waste lands, and fields. House refuse and other refuse matters are to be seen in a shootle revery rillage accumitation has in the seed on a state has been in heart of houses.
SANITARY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	Water-supply.	Is taken from the river Howli, bhils and wells. Tanks are rare. The bhil behind Dudnatila has deteriorated, and its water is unfit for drunking. The yest well is at Paranpur. In the same transpare there is a same water truck which has sitted up, and contains water rendered unwholesome from decaying regetation.	Is obtained chi. fly from the river Itchamutty and its off-boyts, from bhils, the jole at Saraberia, and from a few turns. The Itchamutty is almost dry in summer, and is covered with weeds and noxious plants. The water of the bhils is impure during the dry geason, and the Bhoyrub bhil at Akhandaberia is subject to contaminativation various ways. The tanks have allted up.	Is had from the river Bhyrub, khals, bhils, bandhs, joles, and tanks. The water of the river is discolored at spring time owner to its mouth having been obstructed by the railload at Jornagur, where the bridge is too small to admit of free flow of water. The bhils are used as public latrings and in other objectionable ways.	Is taken from the river Bhagiruthi, tanks, and wells. One tank and three wells have been protected from pollution and reserved for drinking purposes.	flows into fields and bhils. It is is taken from the river!Bhagirutti, bhils, and telive.
SANITARY	Drainage.	The natural drainage is pretty free, but the Hown embankment retards drainage of rain water. The Naliore icle is a sort of outlet for the drainage of the villages situated about it. The cart tracks in the villages serve the purposes of drains.	The drainage is defective Rain-water stygnaters on the village pathways, being obstructed in its outflow, particularly at Akhandaberia and Chandpur. A jote on the west of Saraberia serves the purposes of a leain, and there is also much water-lorging.	Drainage is defective in some parts. The I drain in Jumuria has been obstructed with silt deposits and is covered with Wauriant recreation, and this village and Andulberia and Hajidia are water-logged.	Drainage is defective. The main outlet drain in beginning near the Civil Court is already almost choiced up with jungle. This in a very few years, if allowed to continue, will completely block the outflow of water. Many of the pacca drains in Berhampur and Khagra require to be remodelled.	Drainage flows into fields and bhils. It is very defective,
10%.	Bowel-com- plants,	;	-	e1 ©	1.8	=======================================
THS FRO	(Уројеш,	94 65	9.10	1.64	12.	F
RATIO OF DEATHS FROM- PER 1,000 OF POPULATION.	Povor.		31.29	न हो .क	16:64	29.23
RATIC PER 1	-×und-linuik			į		į
	Population.	63,114		40,120	23,605	8,345
	Name of Circle.	Damurhuda — Rural	Kalupul – Rural	Jibunnagur—Bural	Berhauspur—Toten	Sujaganj—Bural
	District.		Nuddes		Washidahad	

Goradazar - Bural	12,633	•	£1.63	83	- 10.	Drainage flows into fields and bhils	i, bhils, and tanks. D	Is taken from the river Bhagirutti, bhils, and tanks. Domestic cleansing is pretty good, but there are no conser. The quality of the water is generally bad. waste lands, and fields.
City Murshedabad— Town.	39, 231		#3. IS	19.	10 60	Although much has been done to improve the drainage of this town, much still remains to be done before it can be considered efficiently drained. In Azingani the original is not good, a good outlet: it required, and the present purces outfall requires to be extended so as to remove the blosk of filth in the drains and the present purces outfall requires to be extended so as to remove the blosk of filth in the drains and the private water. The private wells are more the drain accountates.		Domestic cleansing is fairly well attended to. The houses are swept and washed morning and evening. There are, however, many sanitary defects bodly disposed of rubbish insufficient removal of night-soil, intramural burial, flith reservoirs, and insufficient privy accommodation for females, children, &c., Till improvement in all these matters is effected, the town cannot be considered to be in a good sanitary condition.
Shahanagar—Rurol	8,523	•	29.62	::	9.	Same as in Assenpur thana described below Same as in Assenpur thana described below	i	Same as in Assanpur thana described below.
åssanpar–Bural	11,177	!	10.58	92.	ŝ	Drainage is to fields and khals. It is generally is taken from the river Bhagiruthi and from defective. of water.		Domestic cleansing is fairly well attended to. The house are crowded together. No conservancy arrangements.
Manullabazar-	1,979	ξ, ————————————————————————————————————	77.0 7	22		Same as in Assanpur thana described above Same as in Assanpur thana described above	1	Same as in Assanpur thana described above.
Kandi— <i>Toton</i>	10,661		15.19	£	1.12	The town is drained by the river Mourakhi, Is taken from tanks and from the river Moura-said to be and the nulls that passes through it. The quality of the water is said to be pretty gried.	the river Moura-	Surface cleansing is tolerably well attended to by the people themselves. The municipal authorities simply look after the populous and bazar portion of the town. There are six public latrines (three for males and three for females), and two more are in course of construction. There are few private privies, which are cleaned at the owners cost. The night-soil from public and private latrines is either buried or thrown into the fields. The arrangements, under the head "Disposal of the Dead" are satisfactory.
Kandi – Baral	73,659	1	1714	ģ	01.	The natural drainage of some of the villages, particularly those situated on elerated particularly those situated on elerated tanks and bhils. The water of the former is good, but it is very defective in said to be good, but that of the latter is polluted the villages that are situated on low land, in various ways. The side-drains are non-effective, deficient in outfall, and levels, obstructed and water-logged in places.	ourakhi, and from er of the former is he latter is polluted	Domestic cleansing is more or less observed by the people. No conservancy arrangements exist in any village. Cattle dung is utilised, partly for fuel, and partly for manure. Defecation on the reads and pathways and on the banks of tanks is very common. The Hindus burn their dead on the banks of the Mourakhi river, but there is no fixed burial-ground for the interment of the Mahomedan dead.
Jugipur—Toum	10,187		13.93	4.	9.18	Some of the roads have purca drains, which discharge chiefly into the river Bhagriuthi the Kolsa, and which discharge chiefly a Karkari creeks, and from tanks and wells, gruthi. In Jungipur therefis a large central exercation, called Luckhijole, which receives much of the local drainage and is a source of great nuisance.	ithi the Kolsa, and ks and wells.	Sarface cleansing is fairly well attended to. There are two public latrines, one in Rughunathean, and the other in Jungipur; both of them are kept pretty clean.

R THE HEAD OF-	Domestic clearance.	The villages are generally open and airy, but those situated near the river Bhagiruthi are surrounded with sintated near the river. The conservancy arrangements bad. The banks of the rivers and the pathways are resorted fro defectation, and there are pathways are resorted for defectation, and there are unhealthy bollows and st habitations. Bones of cattle are also to be met with on waste lands and in gardens.	The dwelling-houses are made of mata, straw, hamboo, reducing Ac. No conservatory arrangements exist in any village. Jungles and bamboo clumps abound in common; the govala busis are very fithy; there are common; the govala busis are very fithy; there are common; the govala busis are very fithy; there are common; the govala busis are very fithy; there are hecomorphic and decomposing cattle-dung pits in Sreemantapur and decomposing; and the gardens in Bonapara are covered with kachini shells and human focus.	Same as in Rughunathganj thana described above.	in The houses are devoid of ventilation, and those in Duttable in the order of the order orde	The houses are mostly made of mats, reeds, bamboos and grass. Sind, walled houses are rare. The houses are scattered and are not crowded with inustes. Domestic cleansing is not generally observed. Unheality blones and atthere, heaps of manue and sweepings, bones and atteredons of eatile on the waysides, and itter about houses, and defocation on the banks of the waker-connecs are common in the than. In some villages cowdung is dried and used as fuel.
SANITARY ESTIMATES OF VILLAGES IE EACH CIRCLE UNDER THE HEAD OF	Water supply.	Is taken from the Bhagiruthi, river, and from the Shahesh and Aganga blila. Tanks are feeperally polluted. There is, however, one good tank in Barachimul, and a hollow in Faritpur has been enlarged into a tank. Water difficulty is experienced in the dry season.	Is taken from the river Bhyrub, a bhil, three tanks, joles and wells. The Bhyrub, the only water-curse in the brans, is deep, and flows throughout the year, but it is polluted in several ways. Defecation is also carried on on its banks. The Raish's tank in Sreemantapur is in a good condition, and is guarded against pollution. A tank in Bansgoria, which was excavated and fenced some theey years ago, contains good water. There is a stretty of good drinking water in There is a stretty of good drinking water in this thans during the hot season.	Is taken from the river Bhagiruth, and from bhils and tanks. The quality of the water is generally bad.	The chief sources of water-supply are the Bhagiruthi river, the baroar biil, and the tanks. The slope and the bed of the river as well as the sides of the tanks are freely resorted to for defectation.	Is taken from the rivers Pudma, Bhagiruthi, and Bhyrub, and from khals, joles, bhils and wells. There are very few tanks. The khals, bhils, &c., along the portion of the Bhagiruthi within this than silt and dry up in the spring, and then there is a searcity of water. This contingenty does not, however, occur in the opposite side of this river.
SINITABY E	Drainege.	Most of the villages are liable to inundation. Is The village Radhanagar has been entirely 6 engulied by the encreachment of the river a busgiruthi. Thoroughfares are vanting in many large villages. Water-logging its not very common. Drainage is pretty good.	Rain-water is pretty well drained into the Bhyrub river through joles, but at Sreamantupur the drainage is bad.	Drainage is free on account of the high posi- tion of the villages and from the undulating nature of the ground. Rain-water is tolerably well drained into bhils and fields.	Drainage is 'not free, the villages are water- logging in several places.	The Bansgaria and Nyamatpara road gets Is water-locged, and the road along village Chardup was breached by the floods of 1885, and the part where its cultert was, has been converted into a doba. Water stagnates in many villages. The road outside of Chokerepara has entirely obstructed the drain age of that village.
	plantes.	e	152	4 0.	80.	21.
RATIO OF DEATHS FROM- PER 1,040 OF POPULATION,	Сполота.	- కి	3	នុរ	7.	1.07
OF DEAT	Fuvor.			18.21	16.22	25.45
RATIO PER 1,0	-xoq-llam8	i		i	•	50.
-noitalnqoq		62,:69	960.99	67,912	108,025	75,423
	Name of Circle,	Ruchunatheanj— Bural.	Dewansoral—Rural	Barwa – Bural	Bharatpur—Burai	Goss-Rural
	District.			Murshidabad		

The dwelling-bouses are mud-walled, and devoid of ventificion. In many villages the bustis are open and airy, but in a few the houses are crowded together. House retures is thrown on patthways and in waste hands, in some villages sweepings are used in filling up holes. Cattledung is collected in manure pits. Passes and pathways are defiled with human excets. No conservancy arrangements exist in any village. Burals generally take piace in the compounds of dwelling-houses. In some villages the pauper dead are east into the Shialmari nadi.	The honses are constructed in the usual manner, but some of them have mat walls, and they are arranged in long lines instead of in the usual groups. Deforcation is carried on on the banks of the Byrrub', in gardens, on pathways, and about the dwellings. Hellows containing dung, sales, decaying vegetation and stagmant water are common. The habits of the people in the Basuntapur village are particularly unclean. Dead cattle are thrown on waste lands. Cowdung is generally utilized as fuel.	Junele abounds in the villages of this thans, and is so dense in some places as to afford a habitation for wild animals, of which the wolf is the most common. The houses are subject to ground damp during the floods and heavy rains. The villages are generally unclean. Accumulations of house-refuse, rotten cattle dung, &c., are allowed to be in and about the dwellings. Delegation: a promiscrous. No conservancy arrangements or exist in any village.	Same as in Haribarpara thana mentioned abore.	The houses are mud-walled and Scattered, and in some villaces separated from each other by jungle and hamboo clumps. Donestic cleansing is not observed. The habits of the Musselmans who form the bulk of the people are very filthy. Gattle-dung is dried and utilized as fuel. Delpeation is promiscuous and is largely carried on ou the foreshore and ever bed of the hisgrinthi river. No conservancy arrangements east in any village. Cremation takes place on the hank of the hisgrirthi, and burials are also made on the banks and in the dried-up portions of that river.	This thana is comparatively free from juncle, but numerons banhoo chunps are to be seen in villages Palshi and Gurey. Generally speaking, the conservancy arrangements are pretty fair, but pits of condung and arrangements are pretty fair, but pits of condung and minute and cessoois are sometimes seen smidth habitations in Kamphole, Mominabad, Itacharun, and Dhiugur villages.
at drainage is good in most of the Shakwari undi, wells and thoria rivers, the Trooping to Shakwari undi, wells and tanks. The slope Shakwari undi, wells and its bedishmari madi a resorted to for deforation, Shatberia, Gundaspur, Hetampur, water is muddy. A want of good draiking water is much felt in the villages of Manking water is much felt in the villages of Manking the rains, the water flowly of Shumbhungar. Gungadaspur, Hetampur and Bazikur. The water difficulty of Satheria has been in a great measure infectly of Sat	is pretty free. A little water-logaing is obtained from the Bhagiruthi and Bhyrub are in Shusabad. This thana is river, and from bhils, khals and wells. In somewhat high ground, and is many villages there are wells only : tanks are intile affected by floods. Interest the quality of the water has not been stated.	obtained from the river Bhyrub and its branch salled the Baromewhis khal, tanks, bhils an realls. Some villages are honeycombed with solicows from which water is taken. The tanks the choked up with weeds and other vegetation at there is no running waterourse in its than food drinking-water is scarce. The tanks an indiscriminately used for drinking, bathin midiscriminately used for drinking, bathin mashing of soiled clothes, and laving of domest numals.	Hariharpara thana described Is obtained from the river Khoria, tanka, bhils and wells. The tanks are choked up with weeds and other vegetation, and they are indigcrianingly used for drinking, bathink, washing soiled clothes, and laying of domestic animals. The water is thus polluted and rendered unfit for drinking.	is situated on a little higher level is taken from the Bhagiruthi and Dwarks rivers, the adjoining than Khungram, and and from tanks. The water of the river brake for age is pretty free. It flows into the as streams through the Kandins. The befit for drinking, notwithstanding that nuiseability of the soil assists the drainage.	semewhat elevated Is obtained generally from bhils and tanks. The base is trely carried on on the banks of has, been tanks. The Bachis bhil, the largest and med which have caused important one in the thana, is covered with in extent but the vegetation, and dres up in the hot season when is good. There is there is a scarcity of water.
of The natural drainage is good in most of the villages, owing to their position being on elevated ground, but it is defective in the villages Shatberia, Gundaspur, Helampur, and Bajapur, which are situated on low and and are flooded during the rains.	.55 'Oralinage is pretty free. A takes place in Shusaba situated on somewhat his therefore little affected by	134 (2) There are only two roads—one leading from Is Gorbazar and the other from Harlarpara. Both of them become very clayer in rains, and in sor-, places impassable. This thans being on a flat surface, the drainage is generally defectivel draining finds its way into corr-lields, tanks, and water hotes. The outfall is into the silted-up Baromeshia khal or into undrained bhils. This thana gets water-logged.	*** Same as in Haribarparr above.	This thans is situated on a than the adjoung that the adjoung that there is little or no flood drainage is pretty free, natural streams through permeability of the soil a	287 This than is situated on somewhat elevated ground. One of the principal reads, from Neveran to Kaliangani, las, however, been breached by the floods, which have caused a wide gap half a mile in extent, but the dramage of the than is good. There is no water-logging worthy of notice.
3	36.16	11:08	23 ·	83.	역 경
:				<u> </u>	
108,508	39,568	67,135	47,559	34.53	305,78
Jelhinghi – Rural	Dowlatbazar Rural	Hariharpara—Rurai	Nowada-Esral	Gokuts.—Rural	Kalianyanj Rural

			RATI(PER 1,	OO OF DE	RATIO OF DEATHS PROY-	0X-	SANITAR	SANITABY ESTIMATE OF VILLAGES IN BACH CIRCLE UNDER THE HEADS OF	B THE HEALS OP-
District.	Name of Cire	.nothalago ^t	Small-pox.	Fever.	Cholera.	Bowel-com- plaints.	Drainage.	Water-supply.	Domestic cleansing.
	Badurihat or Sagor- aighi—Eural,	27,859		£9.Ŧ£	1.61	<i>1</i> 0.	Most of the villages are situated on elevated ground. The outfall of the natural drainage is pretty gnod, except in Popara village, where water collects in holes, &c., and stagnates.	Is taken from the river Bhagiruthi and from tanks and two dighies: the Ramshazur and Shagurdigh. These dighies are well known and contain wholesome water. The lilp plant in the tanks filter the early impurities of the water, and such tanks are commonly wet in fields. In some places there is a scarcity of water in the dry season.	The houses are widely apart from each other; except on the bank of the river Bhaziruthi, where they are close and in rows. The busices are open and free. Nothing particularly unclean is to be seen in any village. No conservancy arrangements exist.
	Blagwangola Rural.	67,238		88.88	1.93	9.	This thans is strated on a lower level than is the thanss which ser round it. Reads are insudicient in many large villages, sink in many the pathwars are low and veryurer raisning. The natural drainages of the than is defective, and artificial drains are much wated. Many villages are water-logged.	Is obtained from the rivers Pudma, Bhyrub, and Bhariuthi, the 'hurkati mula, the Barsthakur and Kessipur khala, the Narajole, and from tanks and wells. The Bhyrub almost dries up in the hi-t season at Khoribora, and animalcula are found in the decomposing water tha. The mains. The tanks are covered with rotting vegenation, and some of them are beset with juncle. The water of some of the wells becomes brackish in summer.	The houses are built spart from each other, admitting of tree perflation of air, and are for the most part constructed of the ordinary materials. The chur villages consist of mere hovels of mars, reeds and bamboos. Cattle litter and other house-relues are thrown about in the compounds and sround the houses, and there are a good many unwholecome hollows, which in some places contain forcing. Defrection on the roads and pathways and on the bant's of the Bhyrnb is very common. No conservancy arrangements exist in any village.
Mnrshidsbad	Shamsherganj Eural.	89,538	6.	78. 88.	6.65	ı,	Theroughisres are wanting in many villages. Watergging is not common. The natural drainage is pretty free.	Is taken from "ie river Ganges and from tanks, bhils and barrs. The tanks are covered with rotting vegetation, and some of them are beset with jungle. Some of the bhils dry up in spring, when there is a scarcity of water.	The villages are widely spart from each other, except on the bonk of the river Ganges, where houses are close and in rows. The bustees are open and free. Domestic eleaning is more or less observed by the people. No conservancy arrangements exist in any village. House-refuse is thrown on pathways and in waste lands. Defecation is promiscuous,
,	Suti-Rural	66,555		19.15	\$.	iò.	There are very few roads, and they are devoid of side-drains. The drainage flows towards and Blagiruthi and Pugla rivers. The Manbazar road gets water-logged.	Is obtained from the Bhagiruthi river, the Pugla and Baston usdis tanks and a few wells. The water of all these sources is, however, rendered impure by all sorts of pollution. Defercation is common on the sides of these water-courses and water receptacles.	The houses are scattered, and none of them are mudwalled. Nolconserancy arrangements crist. The banks of the rivers and pathways are resorted to for defocition; there are unbesliby hollows amidis labilstions, and the bones of cattle are to be met with on waste lands and in gardens. The pauper dead are believed to be thrown into the Bhagiruthi river, particularly in Kalliganj.
	Mireput—Bural	45,496		23:14	1.60		Most of the villages heing situated on elevated formund, the draining is pretty free, but it is very defective in those villages which are situated on low land.	Is taken from the river Bhagiruthi, and from tanks and wells. There are several dightes or a rificial lakes with high banks, but nearly all of them have descenerated into silted and chuked-up tanks. Notwithstanding, water from them is often used for drinking and other purposes.	Domestic cleansing is observed by the Hindus, but not by the Mahomedaus, who are dirty in their habits. No conservancy arangements exist in any village. Defecation is carried on everywhere. Cremation takes place on the bank of the river Bhagiruthi, and burials in private enclosures.
	L Kburgram – Burol	54,018	20.	15.05	61.6	\$	The drainage is defective. The villages are subject to floods generally by the overflow of the hill-stream Moyurakhi. The rain-water is drained into, the hill-stream and into the Patun khal.	Is obtained from the river, Dwarka, bbils and tanks. Many of the tanks require reclamation; most of them are over grown with vegetation, and a few have silted up.	Domestic cleansing is somewhat observed here. There are, however, foul ditches and holes in Bajpur, manurepits in Dhumalpur, and cattle bones in the fields in Jabuni.

Khulna – Towa	6,178	i	89.9	ži Ši	1.13	The drainage of this town is fairly good, but there is much room for its improvement,	Is taken from the river Bhyrab, and in places away from the river from tanks. The river water is tolerably good, except during the rains, when it is poluted by the overflow of stagnant bhils, it sanks are generally covered with vegetation, which is pushed back at the spot where people draw water for drinking as well as for other purposes.	The conservancy arrangements are far from satisfactory. There is only one cart for removing sweepings, consequently much is left round the bosses throughout the bosse. Defencation is critical on everywhere, and the forcal water is washed into the distributes and tanus, used for domestic purposes. The private privies are of the worst description, and are never cleaned properly.
Khuins—Rural	121,212		14.91	95	1.	The soil is clayey with an admixture of sand. The drainage of the place is very defective.	The drainage of the place is very defective. the latter are full of weeds, and their banks are covered with low jungle.	The houses are made of split bamboo' walls, the roofs being thatched with straw. Domestic channing is none or less observed, but no conservancy arrangements exist. Cattle are housed in separate buts. There are no roads, and the village paths are lined with rank vegetation. Defrecation is promiseuous. There are no appointed burning and burial-places.
Sathira-Tour	8,738		14.87	ŝ	Ħ	The drains are kutcha, except four deep culverts at the mouth of the drains, discharging into the Satkhira khal. The drainage of three wards is to the khal that of the rest to bhils, some of which are in municipal limit.	The drains are kutcha, except four deep cut. Is from the khal and tanks; the former is bad, into the Satkhira khal. The drainage of three wards is to the khal that of the rest to bhils, some of which are in municipal limit.	There are no public latrines. Privies are cleaned by private meliters. At present sweepings are thrown into the khal, making the water worse.
Satkhira - Rural	87,876	:	20.64	8 .	40.	Drainage is very defective. There are numerous exavations on and at the sides of the one treche read that exists in this thana, and in these water collects and stagnates.	Is taken from the river Betna and from wells. The river is silted up and nearly covered with weed, and the water smells of vegerable decom- position; the tanks are also covered with weeds.	The dwellings are built of mud walls, the roofs being thatched with straw or leaves. Domestic cleaning is fairly well attended to, but no conservancy arrangements exist. Peleceation is promiscuous. The Hindus burn their dead on the banks of the river Betna. The Mohamedaus bury theirs in their homesteads.
Dumris and Talls-	109,020	1	71.91	<u>\$</u>	60.			
Bitaghatta—Bural	87,501		15.62	9.02	.58	Same as in Satkhira thana described above	Water-supply in these thanns is chiefly taken from tanks which are not free from suspicion.	Water-supply in these thanns is chiefly taken. More or less the same as in Sathhira thans described from tanks which are not free from suspicion.
Paikgatella - Rural	70,478		13.61	\$2.8	÷			
Bagirbat Rural	137,818	200.	19-33	3.17	ä	There is no drainage system. In some places the water flows into rivers and khals; in others it collects and stagnates in diches, holes and excavations, from which there are no outlets.	Is taken from the river Bhoyrub, khals and tunks; the water in the last-named is said to be clean, although they are full of weeds.	The dwellings, which are kept pretty clean, are made of split bamboo mat wails, the roofs being thatched with faces. There is a good deal of jurgle in this thans, and that is where people generally resort for deflocation. No conservancy areasements exist. There is no hurial-ground. The dead are interred in homesteads.
Mollahat - Rural	60.478	1	11:48	1.38	ឆ		•	
Rampal-Rural	40,527	i	19.14	35.50	1.80	Same as in Bagirhat thana described above	Same as in Bagarlast thans described above	Same as in Bagirhat thana described above.
Morelleanj-Rural	62,670	:	14.54	2.15	12.			

7I.]
	7I.

District.			KATIO OF PER L'ON	OF DEA'	DEATHS IROM- OF POPULATION.		SANITARY 1	SANITARY ESTINATE OF VILLAGES IN BACH ('IRCLE UNDER THE HEADS OF	THE HEADS OF-
	Name of Circle,	.moitslugo¶	Small-pox.	Fever.	Сронеть.	Bowel-com- ploints.	Drain sge.	Watezsupply.	Domestic cleansing.
	Kalorcoa – Bural	81,398		18.51			Drainsge is very defective. The country is no low-lying that it is almost every year inundated in the rains by the rise of the Itchamuty river.	Is obtained from the river Itchanutty and from halas which contain sweetish water; also from tanks which are full of weeds.	The dwellings are of mud walls and thatched roots. Domestic cleaning is pretty fair. No conservancy arrangements exist. Defectation is promissuous. Cowdung and refuse is cellected outside the dwellings.
Khalbs	Nagura – Rurol	48,312		89.02	1.32	3	In places where drainage exists, it flows into khalvand swamps. in most of the villages of this thans, however, there is no drainage at all. Water collects and stagnates in foles, ditches and axeavations, from which there are no outlets.	Is taken from streams, khals and wells, mostly from the two sources lest named, which dry up in the hot season, when there is a great conveity of water, and the people have to go a long distance for it,	The dwellings are made of mat walls with thatched straw roofs. No conservancy arrangements exist. Bubbish and offensive matter is allowed to lie about the place. Deforeation is promiserous. There are no sppointed cremation or burying-places. The Hindus burn their dead on the banks of streams. Mahomedans bury theirs in their homesteads.
	Assaruni-Rural	62,412		19-77	1.74	7	and a few sections of the sections of the sections of the section		o we have done in a tree
	Kaliganj-Rurof	146,130	:	16.65	1.18	<u>ئ</u>	SHORS IN BREUK HERER RESCRICE ACCTOR	i	CAMP 25 III ARKUTA LIBUR WOSCIOUS COOL
	Kotwali (Jessore) Town.	eç.				11	The drainage is pretty fair; it is towards the river Bhyrub. Six main drains and several small small saucer-shaped ores joined to them drain the town into the river Bhyrub. There are 17 pucca and 85 kutcha drains. All of them are kept in working order.	Is taken from the river Bhyrub by those who live near it, and from tanks and wells by others. Five of the tanks are reserved for drinking purposes, but the Pundit tank user the 'Ushirman's house receives inward drainage from the cattle stand at the Chairman's house, and is surrounded by much vegetation and overluing by trees. The water is not good, and the tenk requires to be water is not good, and the tenk requires to be much more opened out to air and light. The wells are well princeded from pollution. The	Surface cleaning is fairly attended to. Sweepings and rubbian are used (or filling up excavations and low lands. Dung and refuse from the cattle-sheds and stables are not properly disposed of. There are five public latrines. The private privies are under municipal management. The night-soil is trenched, but the frenches are two deep made to suit the discharge from carts. If other graunds are taken up, buckets only should be used. Fromiscross deforeation is common, The arrangements in connection with interments are
Jestore						_		plants, and becomes a stagnant pool in the cold season.	1
	Kotwell-Rural	153,859	1	13.87	5	3	Some of the rivers and khals which form the natural draimage have silted up; the draimage is therefore defective.	Some of the villegers resert for water-supply to the Bhrunb and Mutteshwari rivers, which are the full of weeds and have silted up at their sources; some villages have wells, but they are situated on objectionable sites, have no grazajets around their margins, and are pulluted in many! ways; and some villages obtain their supply of water from old and shallow tanks.	The dwellings are badly constructed, and set, as a rule, devoid of ventilation, etcepting those which have their walls made of split banboo, through the crevices of which air passes; but these openings also expose of which air passes; but these openings also expose the people to cold and rain. The floors of the dwell-ings are generally kutchs, but are kept clean. The house pards are smept regularly twice a day, except at harvest time. No conservancy arrangements exist. Defocation is promisenous.

Houses are made of split bamboos or mats and thatched with grass. No concervancy arrangements exist. June le abounds in the villages. Defocation is carried on in the jungles, in waste places, and on rodsides. There are no proper roads. Dead bodies are thrown into the rivers and khals, some after being only half burnt.	Dwelling-houses are built of mud walls or split bamboos and thatched roofs, and are surrounded with junzle. The houses are ill-rentiated. No conservancy arrangements exist Sweepings and refuse are not removed. Defecation is carried on promiscrously on the banks of river and in waste lands and on readsides. Hindus burn their dead on the banks of the river Nobogauge, and Mahomedans bury close to their dwellings.	Surface cleansing is attended to. There are two sweepers and two carts for the purpose. There are hamb-to topes and jungles in the town, and large hollows and exavations on either side of many of the roads. A few of the roads only are metalled, the others being kutche. There is one public latrine and one urinal; another latrine is being constructed. Well-to-to people have well-privies of their own; others resort to waste lands and jungles for defocation. Cremation and interments are carried on in appointed places. The markets are kept clean.	Houses are made of split bamboes and thatched roofs. No conservancy arrangements exist. Deforation is carried on anywhere and everywhere. Hindus, sa rule, throw their deed into Kapedak river after only partially burning them, and sometimes after only bruching their mouths with fire. Mahomedans bury their deed close to their houses.	House are built on raised mud pliuths, and are made of split banbooe thatched with grass. There is great deal of jungle in this thans. There are no proper roads, and no conservancy arrangements exist. Miver banks and waste places are used as latrines. Hindus cremate their dead on the banks of the rivers, and the Makomedans bury theirs close to their dwellings.	The houses themselves are kept clean, but low jungle is allowed to grow round about. The conservancy arrangements are most objectionable. There are numerous pits and excevations which have become reservoirs of feernng filth of every description. There are a few larrines on the banks of the rivers and water-course, but defereation is still promiserously carried on. Hindus burn their dead on the banks of rivers and khals, and Mahomedans bury near their houses.	No conserrancy arrangements exist. There are no proper roads. Fromiscuous defendation is carried on. Cremating takes place on the banks of rivers, and interments by Mahomedans are made close to their houses.
Is taken from the rivers Bhyrub, Kapadak and Bhudder, and from several tanks, khals and ex- cavations. The water of the rivers and khals is polluted by dead bodies being thrown into them.	Is taken from river Nobozanga and a khal and from wells. The water of Nobozanga has become starmant, and is polluted by fishing weirs (kumars). The khal dries up in summer.	Is taken from the river Kapadak by those living near it, and from tants and wells by others. The river Kapadak has silted up, and is choked with weeds, and rendered worse by fishing weirs.	Is obtained from the river Kapadah, khals, tanks and wells. The river Kapadak is stagmant and full of weeds; and dead bodies are cast into it. There is no good tank, In some villages scarcity of water is much felt.	Is taken from the rivers Noboganga and Kumar, and from dirfy tanks and wells. The water of the rivers has become stagment and polinted by fishing weirs. In some places the people have to go a long distance for drinking water.	is obtained from the rivers Bhyrub and Chitra and from bleeis and tanks. There being no good tanks, the want of good water is much felt in some villages.	Is taken from rivers Bhyrub and Chitra, and from tanks, baors and excavativns. The wint of good drinking water is much felt in most of the villages.
Most of the villages are struated on the banks of rivers, but the drainage, instead of flowing into the water-course, flows into bleels and swamps which abound in the surrounding country.	Most of the villages are on the banks of the river Noteganga and a khal. These as well as the villages in the surrounding low tracts are washed out ever year by the rise of the river. Drainage is defective.	The natural drainage of the town is towards the river Kapadak, fields and a khol. Many of the roads Lave been provided with puoca side-drains.	Drainage is defective. Pita, hollows, excavations and khals receive all the surface water, &c.	The villages are on the banks of the ricers Nobreauga and Komar and khals, and are subject to nunrelation. The dramage flows into bleels which have silted up.	This thans is situated in the banks of rivers and kals. It is generally low-lyite, and is inundated every year. The drainage flows into bheels and fields. The khal between fingers and Sulpur also serves as a drain. It be portion of the Uhitra river, which formerly passed through some of the willages, has sifted up and obstructed the drainage of those parts.	Most of the villages are low-lying and are in- undated every year. Drainage is defective.
85	70.	38	ş	50.	*3	8
1.24	92.	Ę.	1.5	1.38	85.5	6.79
17:32	17.92	99. 5 7	\$ \$	16.98	38.8	18.46
						:
85,450.	102,627	788 '6	42,754	159,162	151,362	206'89
Kesubpur - Rurai	Jhenida—Rural	Kotechandpur-	Kotechandpur— Baral,	Magura—Rural	Natal - Rural	Bagarpara - Rural

IE HEADS OF.—	Domestic cleansing.	Houses are made of split bamboos thatched with grass. No concervancy arrangements exist. There are no roads. Deforation is promiscuous, jungles and waste roads. being the favourite places. Hall-burnt bodies of dead Hindu are thrown into the rivers Ranhar and Kapadak. Mahomedaus bury their dead close to their houses.	Houses are, as a rule, made of split bamboos and that ched roofs, and their floors are raised on mud plinths. No conservancy arrangements exist. Defecation is carried on in any place the people find most convenient. Onligees are full of human and cattle carrels, and horses, cook. room and other refuse is collected near houses. Hindu dead are burnt incompletely on the banks of the river Kapadak and then thrown into it. Mahomedans inter in their own homesteads.	Same as Godkhali rural described above.	No conservancy arrangements exist in this thans. Promiscuous defrecation is carried on to a great extent. Cremati n takes place on the banks of the river Noboganga, and interments are made close to houses.	The dwellings are built on raised floors, and are made of split bamboos and thatched roofs. There are no proper roads. No conservancy arrangements exist. Fields and roadsides are used as latrines. The arrangements connected with cremation and interments are the same as in other thanss.	Houses are bailt on raised ground, and are made of split bamboos or mud walls and thatched with grass; their floors are kitchea. There are no roads. No conservancy arangements exist. The thans is full of caus and other low jungles. Cremation is carried on on the banks of Mahnmatty, and interments are made in the compounds of houses.
SANITARE ESTIMATE OF FILLAGES IN RACH CIRCLE UNDER THE HEADS OF	Water-supply.	Is taken from the rivers Bhyrnb. Bhuddur, and Espadas, and from kinds and tanks. But the water-supply is very deficient in almost all the villages. In some places where there are no good tanks, the people have made excavations on the silted-up bed of Harihar rivers, from which they obtain draining waker. There is some "dishiner the police-station belonging to Chanchra Baj, but it is silted up, and its water has become so bad that it is no longer used.	Some of the villages are on high ground, is taken from the river Kapadak, tanks, wells The is no drainage system. A kind which polluted by corpses being thrown into it, and by polluted by corpses being thrown into it, and by fainted by corpses being thrown into it, and by fainted to drain the country has silted up. fainted by search of the range of their supply of water.	Is taken from the river Chiters by those living near it, and by others from tanks and boor. The latter tries up in summer, when the people have to wak a long distance for water. The river Chiters is full of decomposing weeds, and has almost silted up.	Is taken from the river Noboganga and Kapashati bao, and from several small tanks excavated in the silted-up bed of a khal. The baor is full of decomposing weeds, and bamboos are steeped in the tanks.	Most of the villages are on the banks of the is taken from the rivers Kulki and Chitra by those rivers Kulki and Chitra, and from mere excavations by every year. The bustis, being on higher others. The water of the rivers is seriound, are fairly well farmind, but the rest polluted by vegetable, decomposition and washnearly four months of the year.	Is taken from the rivers Madhumatty, Goral and Noboganga, and from tanks, baors and exceva- tions; but the supply is scauty.
SANITARI ES	Drainage.	The country is full of swamps and bheels into which the drainage flows.	Some of the villages are on high ground. Thre is no drainage system. A khal which used to drain the country has silted up.	Village are surrounded by fields and swamps into which the drainage flows and stagnates, for there are no outlets.	Villages are situated on the banks of the rivers Noboganga, and Kumar, and around the Kausshati baor. They are innudated every year. Drainage flows into the rivers and blacels.	Most of the villages are on the banks of the rivers Eulki and Chirter, and are inundated every year. The bustis, being on higher ground, are fairly well drained, but the rest of the country remains under water for nearly four months of the year.	The country is low-lying and swampy, and is I inundated every year by the rise of the Machumaty river. Drainage flows into blicels and swamps. The khal between Chardbarny and Hatbarny also serves as a drain.
1 8	-nion-lawof plumts.	8			1.0	9	5
THE FRO)holer a.	, #	\$	16	3:1	G# ::	
RATIO OF DRATHS FROM- PER 1,0(0 OF POPULATION	Pover.	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	86	9.61	26.73	16.34	0.02
	.xoq-lism	8			-		
	.noitalngo	119,531	67,420	508 CS	41,865	50,465	179.88 179.88
	Name of Circle.	Manirampur—Bural	Godkhali—Bural	Kaliganj – Rural	Harinskunda— Bural,	Shalkhia — Rural	Namudpur—Rural
	District.			•	•		

			cxiii			[App. VI
Some of the houses are pucca, others are kutcha, and are made of mats and grass roofs. No conservancy arrangements exist. People case themelves on the lanks of rivers, tanks and roadsides. Hin us cremate their dead on the banks of rivers, and Mahomedans inter them in their own homesteads,	Some of the houses are pucca, others knicha and made of mat walls and straw roofs. Pits, hollows and excatations are common. No conservancy urrangements exist. Defencation is scrized on on the braiks of rivers and in the fields and waste places. There is much jungle in the villages. Crevatitu is carried on on the banks of rivers Madhumatiy and Nobogauga, and interments are made close to houses.	The country is so full of juncle that it gives shelter to wild animals. Six or seven children are said to have heen carried away by jackals. Houses are kutcha, but their surroundings are kept clean. House all they are removed for manurus; the fields. Defecation is carried on in the fields and in any place that is convenient. Hindus burn their dead on the banks of rivers, and Mahomedans inter theirs close to houses.	Most of the houses are pueca and well rentilated, those of the poor are kntcha hute made of mud walls and straw roofs. Villages are full of hamboo topes and other junetes. The randa are in good order. No conservancy arrangements earst. Pits, hollows and excavations are seen all over. Defecation is carried on promiscuously on the hanks of rivers and in the fields, waste places and roadsides. Hardits burn their dead on the banks of rivers. Mahomedans bury their dead close to their houses.	Same as in Bongong thans described above,	Houses are made of mud walls and straw-thatched roofs. They are ill-ventilated without a window or even a hole to admit the sir and light. There are no roads. No con- servancy arrangements exist. People defocate any- where they like. Burial and cremation arrangements same as in other thangs in Jessore.	Surface cleansing is attended to. Two sweepers and one conservancy cart are kept for the purpose. The houses of Bindus are kept cleaner than those of the Maho. In the abound. There are some purea reads which are kept clean. Pits, hollows and excarations are common. There is no public laterine. The well-to-do people are well-privies of their own, but the majority of the people resort to juncke and water places for defearation. There is a burning rhaft, but still the communes of Musepur cremate their dead close to Musi busti, Sometimes dead colicies ure thrown into the kaindus river after being only partially burnt, or they are sell on the banks of the river to be devoured by dogs and locked.
Is taken from rivers, tanks, and excavations made into the bluets around houses. Cattle are washed at the same shât in the river from which drinking water is taken.	Is taken from the rivers Noboganga and Madhu- matty and from tanks. Banks of rivers are used as latrines.	The drain. Is taken from the rivers Kumar, Nobeganga and crous' pite, Kapadak, and from tanks, bheels and baors. The bheels are rivers are polluted by fishing weirs.	Is taken from the rivers Ichamutty and Now-bhanga, and from tanks and theels. Rivers are overgrown with weeds, and the water from the tanks also is not good.	Same as in Bongong thana described above •	Is taken from the rivers Ichamutty, Betna, and Kodla, and from shallow boors, bheels and tanks. The water of the rivers is poliuted by kumare, and is full of weeds, and almost stagnant.	taken from the rivers Bhyruh, Kapadak an etms, and from tanks. The Bhyrub become we and impure in sumner: the Betna has silted p and the Kapadak is full of weeds. The well-do becople use the water of bheels, which is sature be better than that of the rivers. There is on timicipal tank, but baing situated at a distance cannot conveniently be used. Two other tank to being excavated.
Villages are low-lying and sto subject to inundation. There are numerous khals, rivers and bbeels. The dranage flows into the khals and fields,	Most of the rillages are situated on the hanks of the Madhumatty and Neboguza rivers, and are washed out every year. The banks of the revers being histor than the surrounding country, the drainage and the water from the bhesis cannot easily discharge into the water-courses.	Most of the villages are riparian. The drain- age is obstructed by numerous pits, hollows and exercations. The bleels are immusted every year by the ise of the Ku- mar and other rivers.	Some of the villages are on low and some on high ground, but they are flooded whenever the river overflows its banks. The drainage flows into pits, hollows and excavations, which are common.	Same as in Bongong thana described above	Some of the villages are low-lying and are inundated every year. The matural drainage flows into bheels and khals. It is defective owing to the Betna river, which formed the nitural dramage of the country, having sitted up.	The drainage of the town is towards the rivers Is Blyrub and Betra. It is defective. The Existing drains are not properly levelled. Some of the roads are provided with purca ukde-drains, but most of the drains are thutcha.
8	80.	80.	01.		60.	Ęį
83.83	31.8	£0.	(5)	83		19.
13.55	16:35	15:01	27.29	\$0.03	11:36	95.43
:					** OF CHARLES	
72,947	163,963	138,505	879'08	50,223	61.052	55.5.8
Kalia – Rural	Lahagura— <i>Rural</i>	Sailkopa—Rural	Bongong—Bural	Gaighatta-Rural	Garripotha Rural	Moheshpur—Toun

Distnet			RATIO PER 1.	RATIO OF DEATHS FROM-	THS FRO	10N.	SANITABY	SANITARY BETIMATE OF VILLAGES IN BACH CIRCLE TYDER THE HEADS OF	2 THE HEADS OF—
	Nun est Circle.	.noilati qed	.xoq-llamë	Fever.	Cholera.	Вожеј-сош-	Drainege.	Water-supply.	Domestic cleansing.
Jessore	Mcheshpur—Eural	109,452		14.51	1.13	<u> </u>	The villages are situated on or near the rivers. In and are full of bheels and barry. They are intunded devery year. The drainage flows into bheels, barry and rivers, and is defective owing to some of the baors and rivers having silted up.	Is taken from the rivers Kodla, Kulki, Ichamutty and Karadak, and from bheels and baors. The water of the rivers is polluted by the practice of throwing corposes into them. Some of the bheels and baors dry up in animmer, when there is a great scarcity of water.	Houses are very badly made of mud walls with scarcely any ventilation. There are no roads. No concervancy arrangements exist. Deforation is carried on anywhere. The Hindus burn their dead on the banks of rivers. The Mahomedans bury their dead close to their houses.
<u>'</u>	Sharsha—Rural	79.046		à ·	క		The drainage flows into the liberia, baors and I rees. It is defective owing o use river Betna having sited up.	Is taken from the rivers Ichamutty, Betna and Kodia, and from shallow tanks, bheels and baors. The Ichamutty is not much used for fear of crocodiles. Betna and Kodia are full of weeds, and become shallow and unpure during sugarer.	Same as in Gaighatta rural described above.
•	Dinsjpur— <i>Toen</i>	12,660	19.	11.88	10 24	्र इ	A good drainage scheme has been taken in Ison and and a large cut made through the north and west part of the town. It is yet incomplete, but at various places it is draining an eub-soil water efficiently. Junctions by short drains have reft yet heen made, but will be carried out soon. The scheme when completed will improve the drainage of the town materially. The project is being carried out through the liberality of the Maharaja of Dinagepur.	taken com the rivers Gagra and Purnobhat save; as from fants and wells. Some of tanks and wells. Some of tanks and wells have been reserved for drink; purposes, but the ground around the latter hout been shoped to prevent save askage and inwe trat; age. There are numerous private than but they are in a bad condition. Some of the private thanks and shallow wells dry up in hot exason, which causes a scarcity of warduring that season. The banks of the rivers fouled.	Conservancy arrangements are antisfactory. Surface cleaning is fairly well attended to. Sweepings are cleaning is fairly well attended to. Sweepings are removed outside the town. There are it public latrines, in girt-soil from the public and private purivies is removed and buried outside the town. Some of the private privies are cleaned by municipal mehters, they are in a fair condition. The condition of the cattle sheds is unobjectionable, but the dung, &c., are not properly disposed of. There are numerous foul pits and waster holes. Hindus burn their dead on the bunks of rivers and the Mahomedaus bury theirs in an overcrowded burial ground. Some of them bury in places other than the appointed one.
Dinejpur	Dinajpur—Zaral	199,826	.003	30.25	100	1.5	The greater part of this thans is more or less subject to inundation except in the southess, where the land is relatively high and corrected with jungle. But actual persunial marshy land is rare. Most of the villages are above inundation level.	Is taken chieffy from tanks, but also from [wells H and the river Puruobhaba. The tanks are remained with high bank, but their inner alopes are polluted by travellers and villagers, and burnals are frequently made on inner banks as well as on outer banks of tanks. The water of these tanks is turbid.	Houses are mostly scattered and not crowded. No conservancy arrangements exist. Refuse and cattle dung list in heaps in front of houve. Defloration is carried on around the houses and in the fields. The Mahomedan dead are buried in the compounds of houses and on the banks of rivers and tanks.
	Beerganj—Rural	139,891		35.57	1.83	.18	***************************************		
	Thakurgaon—Rural	7920 397	600	60.06	3.		ratifulars regarding these tighns and hot you available	on estinology	•

Ranisonkoil – Rural	75,109		8	0.	황 -	Villages are situated on somewhat elevated goind and are not subject to but dation. The gaid being sandy and dry, absorbs the water quickly. There are numerous pits and diches which contain filthy water and are never drained.	Is taken from kutcha wells, the mouths of which are uncovered. They are situated near filtly ditches and hollows, and are subject to pollution. Washing and bathing are performed at them.	Houses are not orowded together and are built on raised and are forces. They are illertifiated, having only one door and no windows. Surroundings unclean. Sweepings and refuse are thrown around houses. Intervening spaces between houses and waste lands are used as larines. Cattle are housed in fenced houses; then from, houses is allowed to run on foot-paths. The Hind dead are sometimes burnt completely and sone-times incompletely, and then thrown into this and the river Nagore. Mahomedans bury their dead some at a distance from their village and others on the banks of tanks doee by.
Peerganj-Raral	93,880	FI.	35.04	10.	£0.	Particulars regarding this thans are not yet available.	ilable.	
Hemtabad—Ruraf	86,287		# S	69,	7.	Some of the villages are on high and some on low ground. The former are not initidated but the latter are flooded by the river Culie during the rains.	Is obtained from wells and the river Culie, Some of the wells are situated near ditches containing dirty water, and are thus liable to contamination.	Houses are not crowded together. They are built on raised floors and are ill-remilated. Surroundings very dirty, with all sorts of filth. Wage lands and the nearest fields are used as larrines. Cattle are housed separately in the out-houses, and their dung, &c., are stored up there. Dead cattle are thrown into the nearest fields. Complete cremation is carried on among the rich filth complete cremation is carried on among the rich filth such the dead bodies of their friends and relatives half-burnt into the river and some throw them away.
Nawabganj - Rural	61,637		83.14	90.	ş	Particulars regarding this thana are not yet available.	ilable,	
Kalisganj – Bwroł	94,832		7-86.	5 2.	61.	The villages situated on high ground are naturally better drained than those situated on low ground. The latter is subject to inundation in the rains.	Is taken from river Nagore and from shallow wells. The latter are situated in objectionable localities, and their mouths being uncovered are liable to contamination.	Houses are built on raised floors, but their surroundings are every dirty, and sweepings and refuse are thrown around. Defication is carried on in the nearest fields and on the banks of the river Nagure. Cattle are housed separately in the out-houses, where the fung, &c., are stored up. Only the rich Hindus burn their dead completely on the bank of the river Nagore; the rest throw them into the river half burnt.
Bunshihari—Rural	81,877		\$. \$3	3	89.	Particulars regarding this thans are not yet available.	ilable.	
Patnitollah – Bural	883.69	5	27.18	్	12.	Information under this head is not yet available.	Information under this head is not yet avail. Is taken from rivers, tanks, and wells. Some tanks are unclean. The mouths of many wells are protected by fenting.	Houses are built on raised floors, and are kept neat and clean, but estitle duag is heaped in front of them where there is no special receptacle for rubbish 4c., Flores are some latrines within house compounds; but in general fields are resorted to for defrectation. In some places the Hindu dead are thrown into the river Mahomedan dead are interred within house enclosures.
Mohadeopur-Rural	67,285		26.63	- - 1.	\$			
Parsha-Rural	48,556	i	27.02	0ξ.	7.	Information under this head is not yet avail- ble.	Same as in Patnitollah Eural described above	Same as in Patnitollah Eural described abore.
Patiram-Rural	70,681		26.49	.;.	87.			

•			RATI PER 1	RATIO OF DEATHS FROM- PER 1,000 OF POPULATION.	ATHS FR. POPULAT	0M- 10M.	SANITAR	SANITARY ESTINATE OF VILLAGES IN EACH CIRCLE UNDER THE HEALIS OF	ER TUR MEALS OF-
District.	Name of Circle.	.noidulugod	Small-pox.	Fewer.	.влоюлО	Howel-com- plaints.	Drainage.	Water-supply.	Domastic eleansing.
	Gunearampur— Rural.	74,491	i	237	i	10.	Same as in Dinsjpur Rural described above	Same as in Dinajpur Rural described abovo	Same as in Dinajpur Rural described al ove.
Dinsjpur	Chintamon—Rurat	52,058		00.08	es:	Į.	The villages are situated on relatively high i ground, the surface of which is undulating in parts. This thans is above inundation level.	Is taken chieffy from tanks and kutcha wells as well as from the river dumuna. All mure or less frequently polluted by human excreta.	Same as in Dinajpur Rural described above.
	Parbatipar-Bural	804.99		21.18	8 .	857	Particulars regarding this thans an not yet available.	tilable,	
						1		•	
• .	Веацев. — Точъ	19,791	1	96-68	i.		The drainage is unsatisfactory. The fall is good, but the drains are kutcha and difficult to keep in order. The refuse water from those housedrains, which are connected with the public drains, stagnates in the latter.	Is taken from the niver Pudma and from two tanks reserved for drinking and culinary purpose. There are many other tanks, but the water in most of them is utilit for any other use then itse washing of utensus, &c. The river water is a naidered good.	Surface eleusine is not properly attended to. Sweepings, &c., are employed in filling up hollows, and roadside drains, but much of it lies unremoved. Howe fluid redue is thrown about within the premises or into the public drains. There are only three public latrines, and they are kept in a flithy condition. There are about 102 private prives, Many of them are situated near ditches, drains, &c. Those of them which are under the municipality are kept fairly inefficiently. The nichtsoil from the public latrices and from those private cores which are under municipal cortical is buried in deep trenders, but that from the rest are thrown into the the jungles or into any concenient place. Defectation is carried on in the fields and reducides and in drains. Catale are kept within the enclosures of houses, and their sheds are in a bad condition. There are innumerable filthy pits, tanks and water-holes.
oğuanye	Beauleah—Bura!	81.006		40.45	18		The villages are very low-lying and water. If logged, A peculiarity of the general drainage is that it flows away from the Ganges bank and towards the Chalan bull. Numerous fishing weirs impede the drainage in the numerous sluggish nadis and dhars. There is much swampy ground towards the tion, and the country is subject to inundation,	taken mainly from tanks and madis, nearly all of which are highly polluted. Also from a few shallow wells and filthy pools in which bamboos are steeped and refuse thrown.	Houses are built on mud plinths raised about 2 feet from the surface. Except in the case of the hut's of the lower classes, the enclosures of dwellings are usually cleanly swept. The sweepings are, however, simply thrown out of doors and allowed to accumulate, often heaped up against the wall and by the side of the doorways; sometimes it is thrown into adjoining hollowy. Latrines are absent. The fields and paths on outskirts of villages are used as such. Cattle are housed in the immediate violaity of dwellings; the litter is partially removed and dried for fuel, and occasionally used as manure; but much remains rotting in heaps near dwellings. Hindus frequently bury their dead on the lanks of juils, &c., and where firewood is scarce, they throw them into the water without burning. Mahomedans bury their dead in the compounds of their dwellings and on the banks of juils and tanks. A few villages have burial grounds. Dead cattle are removed to the outskirts of villages.

Nattore—Earal	153,662	Ś	33°45	÷	.18			
Lalpur or Bilmara— Raral,	84,952	-	23:17	ģŝ	.	Same as in Beauleah Rural described above Sa	Same as in Beauleah Rural described above	Same as in Beauleah Rural described above.
Bagmars-Burci	121,581		23.68	8	É		·	
Nougaon—Bural	85,540		26.93	12		Some of the villages are on high ground and Is on the river Jumns. The natural drainage a of this thans is good. Some of the villages, however, which are situated on low ground is are very imperfectly drained.	Is obtained from the rivers Jumus and Patirin and from tanks. The water of the Jumus is defiled by branches of trees being allowed to lie in it for the purpose of catching fish. The waterwappy of this thans is plentiful throughout the year.	Houses are built on raised ground, but their floors are damp. No conservancy arrangements exist, but the villages are fairly clean as regards surface-cleaning, everpings are fairly clean as regards surface-cleaning, houses. Defereation is carried on in fields, jungles, and on the banks of rivers. Hindus burn their dead on the banks of rivers, but at no fixed place. Mahomedans bury theirs within the compounds of their houses.
Mandar—Burol	103,308	i	27-73	.20	.01	Particulars regarding this thans are not yet available.	ble,	
Putis—Bural	121,238	i	76.0 6	1 0.	ģī	Same as in Beaulean rural described above Sa.	Same as in Beauleah rural described above	Same as in Beauleah rural described above,
Singra—Rural	112,607		29-53	3	86.	The drainage is good, the fall being Is towards the river. Some of the villages are on high and some on low ground. The latter are subject to inundation. There are numer. Tous pits and hollows throughout this thans.	Is taken from the rivers Atrai, Gur and Puntisjoha and from tanks; the latter is also used for water in cattle. The supply of water is insufficient. The water of the Gur river is deflied by steeping bamboos in it.	Houses are built on well-raised plinths, but their floors are damp. They are free from jungle and filth. Sweepings and refuse are collected behind houses. Some of the houses have latrines which disclarage into pools, from which people also draw their Trinking-water. People deforeste in fields, jungles, and on the banks of the rivers. Mahomedan dead are buried in the compounds of bouses. Rindus burn their dead on the banks of the rivers dur and Afras. Incompletely burns corpses are frequently thrown into rivers. Ramboos are steeped in the river dur.
Borigram—Bural	121,554		87 82	SF.		Drainage is defective. Villages are situated is on low land and are subject to inundations. Pits and ditches, which impede the drainage, are numerous.	Is taken from the rivers Mandtojs and Baral, and from tanks and wells. The water of the river Mandkoja is of indifferent quality and is semisatement. In some distant villages scarcity of water is much felt during the dry scason, when most of the wells dry up.	Houses are on raised floors and are dry. Heaps of cowdung are seen everywhere. No conservancy arrangements exist. People defencate in fields and in jungles. Hindus burn their dead on the banks of rivers, and Mahomedans bury in their own compounds. Frequently the Hindu dead are thrown into the rivers Mandkols and Baral incompletely burnt.
Charghat – <i>Aural</i>	124,160	•	37.30	Ę	3	Same as in Beauleah rural described allowe, Is but some of the vilages are on high ground and are dry.	Is taken chiefly from the river Baral, the water of which is stagmant. In some villages which are distant from the river the supply of water is obtained from kutcha wells which are insufficient to meet the requirements of the people in the hot season.	Same as in Beauleah rural described above.

•			RATIO PER 1,(RATIO OF DEATHS FROM— PER 1,000 OF POPULATION	IS FROM-	1 15	SANITARY R	SANITARY ESTIMATE OF VILLAGES IN RACH CIECLE UNDER THE HEADS OF-	The heads of—	գ իհ.
District.	Name of Circle.	Population	Small-pox.	Fever.	Oliolera. Bowol-com-	pleints. Bowol-com-	Drainage,	Water-supply.	Domestic cleansing.	A W.1
	Godagari—Baral	43,799	:	98.46	16.	\$	Drainage is defective. The roadsides are not Is properly drained. Most of the villages are structed on low land and are subject to inun-tit dation during heavy rains.	Is taken from rivers, tanks, and wells. The chief sources of pollution are washing and bathing in the vicinity of wells, and placing branches of trees with leaves in rivers for the purpose of catching fish.	The houses, as a rule, are constructed of reeds or emashed bamboos pisasered with mud. They are not over-crowded, but their compounds are invariably kept filthy, and refuse, sweepings, cowding, £c., are hesped behind every house. There are no latrines. The Hindu dead are cremated on the banks of rivers and bhils, and the Mahomedan dead are interred in the compounds of dwelling-houses.	
Rajsbadye es 5	Panchupur—Zaras	77,431	•	17-97	*8	\$	Must of the villages are situated on the banks Is of the vivers Attai, Gur and Nagers. Drain. It age is defective, and is impeded by flahing users. The fall is towards the north. During the rains water comes up to the villages.	and a	Houses are built on raised mud plinths and are dry. Sweepings and refuse are collected behind houses. Filthy ditches and holes are numerque, on the sides of roads. People defeacate in fields and on the banks of rivers. Hindu dead are burnt on the banks of rivers, and Mahomedan dead are interred within the compounds of houses. Carcasses are thrown into the rivers.	
	Tanur—Rerai	85,609	•	34.75	. 42.	Ą	As in Beauleah rural described above; but there are numerous extensive bhils. Villages are generally situated on the margin of these bhils and are bately above inundation level.		Same as in Beanleah Eural described above.	

the drainage, although considerably improved, is taken chiefly from wells, every house having an instill defective. The drainage system of the one two of them. There are five municipal every and Nawabeani, has been no two of them. There are five municipal every and Nawabeani, has been and four other wells reserved for drinking par Some drains have been opened out and others are also some tanks the water of which is in every themselves have been partially filled up., bowever, used for drinking. There are fire municipal meating and our other wells reserved for drinking partially filled up. There are also some tanks the water of which is in experienced from politicon, the public lattines and thom those private ones which are under municipal supervision incremed of his no objectionable manner. Hindu dead are burnt on the four ground and transfer ontails are interned in the neighbouring villages outside the municipality.	being low lying are scarcely above the wells. Bathing and washing some of the house are damp, ill-ventilated and crowded, being low lying are scarcely above the water of which is therefore not free from level. The natural drainage of the water of which is therefore not free from ways and fields. Dead cattle are thrown near houses. Corpses are baried near bouses.
Is taken chiefly from wells, every house having one or two of them. There are five municipal and four other wells reserved for drinking parposes. They are fairly protected from pollution. There are also some tanks the water of which is not, however, used for drinking.	Is taken from kutchs wells. Bathing and washing are performed near the mouths of these wells, the water of which is therefore not free from suspicion.
The drainage, although considerably improved, is still declaries. The drainage system of the civil station. Diags and Nawabgani, has been kept open and some improvement made, some drains have been opened out and others levelled. Some of the holes which cannot empty themselves have been partially filled up.	Village and inun this
	÷
i3 is	1.62
15:33	86.16
20.	1
18,320	116,210
Bangpur or Mahi. gmj Town,	Mahiganj – Raral
. 1	

Kalisganj or Phu- reenbart Kurdi,	156,607	इ	84.73	8.18	91.	Particulars regarding these thanas are not yet available.
Ulipm—Rurai	215,218		12.13	01.4	P.	
Sadullepur—Kuroi	112,563		95,7-78	66.33	22	Drainage is defective. In some places the Is taken from the river Ghagnt and from wells. The floors of the houses are damp. Their water is said to be good, but as bathing are filter, in the said washing are carried on around the latter, near them; jungle abounds. The dead are baried within the water must be more or less polluted.
Darwani—Zared	143,390		26.17	76.3	\$	The drainage is defective. The roadsides are both sources are polluted in the usual manner, not properly drained. Tanks also exist, but they are polluted by defend any. The pathways are filthy. Conservancy as absent, away. The pathways are filthy. Conservancy as absent, away. The pathways are filthy. Conservancy as a been any. The pathways are filthy. Conservancy as a been are polluted by defend the pathways are filthy. Conservancy as a been are swept and leeped, but the sweepings are polluted by defend the property drained.
Nebukganj – Kerel	124,507		99.88	1.91	g.	Villages are generally low-lying, but actual is taken from shallow wells and the river Ghagut, perennial march is rare. The houses are generally above inundation-level. The house are generally low-lying, but actual is taken from shallow wells and the river Ghagut, perennial march is rare. The house are which is also shallow in some places. Bathing and other organic refuse is generally heaped up near houses for manure. The fields are resorted to for defrecation. Corpses and care cases are buried near houses; in some villages within the premises. Some of the Rajbunia burn their dead on the ballow is some of the Rajbunia burn their dead on the ballow in the cases.
Jaldhacer—Eural	163,672		98.13	19.	\$	Farticulars regarding this thans are not yet available.
Dimla—Esral	138,762	65	9 7	3.17	er.	Drainage is defective. The roadsides are not loss taken from kutchs wells the water of which is serrancy arrangements. Hindus burn their dead on properly drained. The balks of the river Teests. Mahomedans bury theirs close to their houses.
Barabari - Kural	142,512	į	21.22	1.23	Şī Şī	Drainage is defective. The roadsides are not in the contracted of reeds or creaming the particular of the purpose of catching fish. The particular of the sand, and is dry. The purpose of catching fish. The possible remarks and is dry. The fine purpose of catching fish. The bouses, are planted with mud. They are not properly drained. The particular of possible remarks and is dry. The fine dead for the purpose of catching fish. Mahomedan dead are intered in the compounds of dwelling, houses.
Kawrganj—Bural	88,619		29.76	% 64	8.	Villages are low-lying, but actual perennial is chiefly taken from shallow kutcha wells, and some of the houses are generally also from nadis, bhils, and few tanks. Some of the houses are damp, ill-rentilated, and crowded together. Retuse and rubbish abound near bouses, and dead above inundation-level.

The houses are mostly well scattered, and not crowded. No conservancy arrangements exist. Befuse and cattledung lie about in heaps, festering in the compounds of houses. Defocation is carried on around the houses and in the fields. The dead are buried in the compounds of houses and ou the banks of streams.		Same as in Bogra rural described above.	Some of the houses are pucca, and some are made of mud walls. (Compounds of houses are clean. Floors are raised and dry. Rubbish and refuse are accumulated in the compounds and sides of houses and in the streets and lanes. Defecation is carried on our the sides of paths. Rinda: burn their dead on the banks of the river, and Mah.medans bury theirs within the compounds of their houses.	Same as in Bogra rural, but the villages are fitthier, and the habits of the people dirty. Dead bodies of the semi-abrigines and Hindus are burnt more or less completely and thrown into the river Jumuns. Defocation is carried on on the banks of the river Jumuns.	The houses, as a rule, are constructed of reeds or smashed tamboos plastered with mod. They are not overcrowded, but their compounds are kept very filthy, refuse, sweepings, sowdung, &c., being hasped behind every house. There are no latrines. The Hindu deed are cremated on the banks of rivers and bhils, and the Mahomedan deed are intered in the compounds of dwelling-houses.	Same as in Bogra rural described above.	Houses are built of mud walls or smashed bamboos plastered over with mud. They have raised floors and are dry. Compounds of houses are filthy. Betuse and sweepings are thrown around houses. Dead are buried within the compounds of houses.
Is taken chiefly from tanks, and also from nadis and wells. The tanks are regularly excavated with high banks, but the inner alopes of the banks of many of them are poliuted by travellers and villakers. Burials are frequently made inner bank as well as on outer bank of tanks. The tanks are also used for bathing and washing purposes, and for watering cattle. The water of the tanks is furbid.		Same us in Bogra rural described above.	Is taken from the river Korotaya, and from wells and fanks. The mouths of the wells are amovered, and their margins are not raised. Bathing and washing are performed near the wells, and the Weter is therefore not above suspicion.	surface being more or less undulat-drainage is pretty fair,	The roadsides are not Is taken from rivers, tanks and wells. The chief sources of pollution are washing and bathing in the vicinity of wells, and piscing branches of trees in rivers for the purpose of catching fish.	Same as in Bogra rural described above	Is taken from wells. Tank water is not drunk, but used for other domestic purposes. Bething and washing are performed near wells.
The greater part of this thans is situated on open paddy plain, and is subject to inundation except the south-east corner, where the land is relatively high and undulating, and covered with considerable junck. Actual perennial massive land is rate. Some of the villages are above inundation level.		Same as in Bogra rural described above.	Fillages are situated on high ground. Drain- are is obstructed by rubbish and refuse from houses.	Villages are situated on relatively high ground, and the surface being more or less undulating, the drainage is pretty fair,	Drainage is defective. The roadsides are not properly drained.	Same as in Bogra rural described above	Some of the villages are situated on high ground and are not subject to mundation. Drainage on the whole is defective. The roadsides are not properly drained.
3	600	i	R	£,	£0,		\$
£1	.12	-	80.	100	10	ä	
8 7	21.57	80.83	34.18 94.18	83.19 61.28	75.53	22.19	ន ន
:	į	1	Ī	ş			
216,750	103,229	59,080	47,463	46,724	89,374	94,534	40,023
Bogra – Ruyal	Sheriakandi Bural	Sebganj- <i>Rarat</i>	Sberpur – Raral	Panchbibi— <i>Raral</i>	Nowsbenj – Zaraj	Adamdighi—Rural	Khetlal—Burai

•			RATIO PER 1,	RATIO OF DEATHS PROM- PER 1,000 OF POPULATION.	THS FRO	M-	SASITA	SANIFARY ESTIMATE OF VILLAGES IN EACH CIRCLE UEDER THE HEADS OF	IDER THE HEADS OF-
District,	Name of Circle.	Population.	Small-pox.	Forer.	Cholera.	-mos-lewofi etrialq	Drainage,	Water-supply.	Domestic cleansing.
Bogra	. Dhunot—Barat	61,003		22.91	<u>ģ</u>	8	Some of the villages are situated on high ground, and their natural drainage is good,	Is chiefly taken from wells the borders of which are not sufficiently raised. They are subject to pollution in various ways,	Houses are made of mud walls and of reed or smashed barboos. They have raised flows, and are dry. Compounds of houses are not very clear. Dead are interred within the compounds of houses. Habits of the people are dirly.
	Serajganj—Toera	1,037	1	28.19	Ş.	g	The town being very favourably strusted, its natural drainage is good, but the drainage is impected by many deep pits which are not connected with one another. There are no pucca drains. Wooden pipes are provided under some of the reads to serve as drains.	Tanks, wells and a khal are the chief sources of water-supply, which is not sufficient. For nearly eight months of the year the supply is very limited and of heality. There are 34 municipal wells, and a tank reserved for drinking purposes only. The latter is fairly subvected, and is kept in proper order. Of the municipal wells, one fourth are purce and the rest kutchs. There are also numberiess private wells which are used for all purposes.	The conservancy arrangements are defective. Furface cleaning is imperfectly attended to. Only the streets in the guil are swept. House-relue instance in the guil are swept. House-relue instance in the guil are swept. House-relue instance, which are quite insufficient for local requirements. They are tepic insufficient for local requirements. They are they clean. Night-soil from the public and private privise is daily removed, and trenched, but the figure everage is allowed to sank into the ground, or is accumulated in pits. About half the house have privise of their own, which comist of bamboo mackens over four posts. Their condition is ad. Premiscuous defection is carried on. Hindre burn their dead on the banks of the river Jumus at the two municipal and one private burning ghats. Mahomedans bury their dead indiscriminately within the compounds of houses.
Pabra	Serdjanj—Bural	198,148		21.36	05.	90.	Most of the villages are situated on low land, and are subject to inundation during the rains. Drainage is defective.	Is taken from the river Jumuna, tanks and wells. The wells are polluted by bathing, and washing being carried on near them, and the rivers by placing branches of trees with leaves in the water for the purpose of catching fish.	The houses, as a rule, are constructed of reeds or smashed bamboon plastered over with mad. They are not over-crowded, but their compounds are very filth; and retuse, sweepings, cowdung, &c., are heaped behind every house. There are no latrines. Hindu dead are cremated on the banks of river, and the Mahomedan dead are interred within the compounds of dwelling-houses.
•	Pubna Tossa	16,267		18.75	25	618	The drainage is primitive and very defective. Il Excepture the bazar drains, all the rest of the numerous drains in this town are kutche and deep. Most of them discharge into the Ichanuity river. Some of them are obstructed. The pacca drains are built over. During beavy floods the water lies in the drains, and the deposited silt destroys their levels.	Is taken from tanks, the river Ichamutty and wells. The tanks are defined in many ways; the river becomes stagnant during the hot weather, and is used for all purposes when flowing; all the wells in the town are kutcha, excepting a well in the kutcherry and four other wells recently consirrcted. The water of the kutcha wells is generally impure. The kutcherry well and the four public wells which are now much reserved for contain, as they are well constructed and protected from polintion, good potable water; but these wells are insufficient for meet the want of the people, Some of the well-to-do people obtain their supply of water during the hot weather from the river Ganges in carts. As the Ichamutty is fast silting up, water difficulty is apprehended.	Surface cleaning is attended to, sweepings being used to fill up excavation, but much remain unremoved. There is only one public latrine, so the people are completed to resert for detocardin to the fields asfacent to their houses. Only a few of the private private are under municipal management. Well-privine are under municipal management, Well-privine arist, The high-coal is trenched, but in deep pita. Hollows and excavations, contaming all kinds of relusand stagmant putrid water, are numerous. The fluid retuse from houses is thrown into pits or allowed; to enter the drains. There are no staughter-houses.

•	Pubus-Beral	174,381	1	88.88	er.	19,		
	Doolai-Rural	186,363	1	FG.98	65.	17.		
	Chatmohar-Rural	133,467		88.68	- 85 - 85	9.		
Pubna	Mathura—Bural	102,496	i	24.48	2.17	£.	Same as in Serajganj rural described above Same as in Serajganj rural described above Same as in Serajganj rural described above.	Ibed above,
	Sharadpur-Eural	216,494	1	20.13	- 99. - 20.	.12	•	
•	Ullapara—Baral	ווגיעו	1	18.21	ş	ģ		
	Raiganj-Raral	92,374	1	99.83	1,18	8		
• *	Darjeeling—Town	7,976	ģ	¥1.8		5.5 E	The general drainage of the town has been constructed and some obtained from nitural springs, which are well improved and is good. Many new side- drains have been constructed and some of protected from contamination and conveyed the facility are replaced and some of protected from contamination and conveyed the facilities are replaced afficient. The drains are penerally connected with the have been provided. Some additional hydranis from the defects in their con- struction are being rectified, The drains are generally connected with the have been specially provided, and dhobies struction are being rectified. The whole of the night-soil is trenched. Both intermediate maniety and are in good condition. The whole of the night-soil is trenched. Both interments and eventson and a propose of the night-soil is trenched. Both intermediate appointed for the privates lating grounds appointed for the privates the privates lating grounds appointed for the privates the privates in the grounds appointed for the private of the two parts of the privates is the grounds appointed for the private of the two all the privates is the market has been improved, but that of the two all the privates is the grounds appointed for the private of the two all the privates is the market has been improved, but that of the two all the two all the privates is the private in the privates is the private in the private private in the private i	oked after in the town and lithy. In the town proper ed in carts to the head of in buckets over the wire public latrines for make for condition is not so all the privates latrines of the condition. It is not so all the privates latrines at renched. Both interpret, eartied on in the proce. The condition of ed, but that of the two
Darjeeling	Durjeeling — Raral	45,300	\$	11.811	13	19 %	The country being situated on high hills, its Is obtained from jiloras (hill streams) and the drains are arriver Runjeet. The water of the former is clean and wood thatched with grave. They have only one and ground ground ground that of the latter is always are publicated to every kind of pollution; its banks are proper or arrangements arrangements arrangements and sweet in the nearest fields. Cattle are brosser of dwellings, hourse, as passent as a passent the should are obtained in the jungles and on the hills indeed or burned in the jungles and on the hill sides of the propile are very dirty.	ind park-are of bamboo is. They have only one of they are clean. No through they are clean. No through they are clean to be a constant of welling hund. People case themselves are boused in a separate housed in they are damp. Dead it has are damp. Dead is and on the bill sides and on the bill sides iver Eunjeet. Habits of
	Phashidewah— Eural,	63,241	జ	22.13	-to-	1.01 F	Particulars regarding this thans are not yet available.	
•	Kurscong - Tours	158.98	1.97	37 39 20 80	Ħ.	02.6	The drainage system is good. The street and street for all purposes is obtained from and house obtained from contamination and conveyed from contamination and conveyed for the from contamination and conveyed for the from the form the form the form the form the form the form the form the formal. The night-soil is buried in trenches at a distance are specified.	d to, and house seaveng. Index. There are six trenches at a distance do not exist. The and inferments are

			RATIO PEB 1,(OF DEA	RATIO OF DEATHS PROM- PER 1,000 OF POPULATION.	, K	SANITART	SANITARY ESTIMATE OF VILLAGES IN RACH CIRCLE UNDER THE HEADS OP-	THE HEADS OF—
District,	Name of Circle.	Population.	Small-por.	Fever.	Cholora.	Howel-com- glaints.	Drainage.	Water-supply.	Domestic cleansing,
	Kursect g - Rural	756,882	1.37	33.25	ti.	9.20	No special information is yet available	Is taken from jhoras (hill streams) the water of which is clean and good,	Conservancy totally absent. Filth and rubbish accuminate near houses. People deforate in the junzle. The roads are clean and in fair order. Dead hodies and eatile are buried in the jungles. Sometimes dead hodies are burnt. Cattle-aheds are separate but within the compounds of dwelling-houses; they are cleaned daily.
Darjeeling	Kalimpong – Rurai.	12,683		6.91	<i>ъ</i> ,	89 90 32	Drainage is free, as there is hardly any level land. In the rains the surface water finds its way into the springs, from which the drinking water is taken.	Is taken from jhoras which, although their heds contain a considerable quantity of decaying vegetable matter, afford water of fairly good quality.	Houses are crowded together and ill-rentilated. With the exception of those occupied by Bhutesha, they are clean. Conservancy is absent. Refuse and sweepings are left near houses or thrown nover the hude. Eagls are in good condition and are clean. Defeoration is carried on in the jungles. Cattle are kept in a separate house within the compounds, and the Layles are clean. Ded bodies and cattle are buried an jungles outside the bustees and away from water-courses. Traveller's rest-houses and the slaughtering grounds are in fairly good condition, and are kept olean.
•	Jalpaiguri—Tours	7,947	į	06.8	1.55	*3	The natural drainage of the town is not good. The country being flat, is liable to inundance. The Thinage system is very defective and is interfered with by numerous pits, hollows and ponds, although almost all the rushs are provided with ade-drains.	Is taken than the rivers Teesta and Kuria, and from wells are taken to prever wells are taken to prever the fouling of the banks of the river Kurla. The are three private tanks and three wells reserved drinking purposes. Of the former, the cone call drinking purposes. Of the former, the cone call two are subject to every pollution, and receives it drainage of the town. The latter are not properly protected. The condition of the private well which are large in number, is bad,	The conservancy arrangements of the town have been much improved, but are still susceptible of further improvement. General conservancy if fairly well attended to The surroundings of houses are not, however, what they should be. The fluid house and kitchen refuse in one properly disposed of, but as lowed to stake into the ground within the premises. Cow and cattle ordure is also collected near houses for manure. There are is also collected near houses for manure. There are is also collected near houses for males and three for it females—in fair condition, but they are not quite sufficient for local requirements. About machina of the people have private privise of their own, which are cleaned daily by municipal methers, and are in good condition. Then inthe-only fine house private privise of their own, which are cleaned the purpose. The arrangements for interments and cremation are satisfactory.
	Julpaiguri – Bu <i>rol</i>	11,411	I	8.12	\$1:3	33	The natural drainage is pretty good, but in some villages it is defective. Those of the villages which are situated on high land are not subject to mundation.	ral drainage is pretty good, but in some! Is taken from kutcha wells, which are mostly dug it is defective. Those of the villages under bamboo clumps. Their mouths are not are situated on high land are not protected. Washing and bathing are performed to mundation, and their surface is always damp and dirty.	Houses are substantially built and well ventilated. They are daily cleaned, but their floors are damp, Bwtephings and retines are thrown into the nearest fields. Defeccation is carried on in the nearest fields. There are no high roads, but the small paths are clean. Cattle are kept in a separate shed within the compounds of houses. Cattle such are clean. Dead cattle are buried outside villages or are thrown away. Dead bodies are buried outside villages or are thrown away. Dead of the Godadhar river.
•	Sikarpur or Sili- guri-Eural.	80,178		28.12	61.	#	More or less the same as in Julpaiguri rural described above.	Is taken chiefly from kutchs wells, some of which are near cesspils. The water of these wells is not above suspicion.	The house floors being damp, the people sleep on machans. The footpaths are not dirty, but filthy excavations exist. Vilages are overgrown with jungles. No conservancy arrangements exist. The dead are dis- posed of ontside of villages.

Tangan and wells, The houses are damp. The footpaths are clean. No concervancy arrangements exist. In village Jagdah there are mehters who clean the half held there twice a week. The dead are disposed of outside of the villages.	of which is good Rouses are substantially built and are 'not crowded to not protected, but machawa. Retuse, &c., are thrown in the fields for manure. There are no high reads; the small paths are clean. The nearest fields are used as latrices. Cattle are housed separately and the sheds are cleansed daily. Hindu dead are cremated on the banks of the rivers Dallah and Soniagani, the water of which is not drunk; the Mahomedan dead are interred near houses.	ich are mostly situ. The houses are raised, but their floors are damp. Sweep. Their nouths are ings and retues are kept in the compound. Defecation in ties nearest fields. There are no high roads; the small paths are clean. Bead cattle are buried in the nearest fields in the off yeason, but during the may season they are thrown away in the most convenient place. Sometimes dead bodies are buried in the fields and sometimes they are buried in the fields.	hich are also used for Guuses are substantially built and are far from each sa. Their mouths are other. Their flows are dann, but the propile sleep on marchans, Sweepings and refuse are thrown into the nearest fields for manure, and are also kept close to house. There are no nest roads, Small paths are clean. Cattle are kept in separate sheds, which are clean. Dead cattle are kept in separate sheds, which are clean. Dead cattle are kept in separate sheds. The nearest fields are used as lattines. Hindus cremate there dead on the thanks of the Karami and Gooladhar rivers. Mahome.	Drainste is defective. Villages are situated on Is taken from the river Teesta during the name, and are annually flooded by the during the dry season from the kutcha wells, chars. Sweepings and refuse are thrown into the near-places for two or three months. Radgide drains are deep and are obstructed, drains are deep and are obstructed. Houses are low and damp, but the people sleep on marges are fined, which are as a latrines. There is no high care in the near places for two or three months. Budding but their dead at the ontstands of the river Teesta and Debylones. Houses are low and damp, but the people sleep on marges and refuse and the near places. There is no marges and refuse an	and from katcha and foors of baues are damp, but the people sleep on the sont rate to other and sweepings lie near house or are copile have to other and seeping a
Is taken from rivers Atrai and Tangan and wells, the water of which is said to be good.	Is taken from wells the water of which is good and pure. Their mouths are not protected, but their margins are raised.	Is taken from kutcha wells, which are mostly situated under hamboo clumps. Their mouths are not protected, and their surface is always damp, washing and bathing being performed there.	Is taken from kutcha wells, which are also used for bathing and washing purposes. Their mouths are not protected, and the surface is always damp.	Is taken from the river Teesta during the dry season from t	Is taken from river Raidanea and from katcha wells. In the dry season there is only half a foot of water in the wells, and the people have to obtain their water-supply by diggring the wells daily. The mouths of the wells are not protected, and their surface is always damp, buthing and washing being performed there.
Drainage is defective, but one village, Jagdah, is fairly drained.	Villaces are situated on low land, and are sub- ject to mundation during the rainy season.	Some of the villages are on high and some on low land. The former are not liabl- to inundation, but the latter are under water during the rainy season.	The villages being situated on somewhat elevated land, are not subject to inundation, and are fairly drained.	Drainspe is defective. Villages are situated on low isnd, and are annually flooded by the Teesta river. The water remembrs in some places for two or three months. Readside drains are deep and are obstructed.	Drainage is good. Roads are provided with side-drains, and they are free from obstruction.
\$		20.	10 10 10	12	£.
1.63	1.30		90 90		53.63
83.44	27.23	\$9.08 	93.50	\$6.63 :	
**************************************				82,453	51,697
178,643	989	66,451	980'38	: :	ļ
Bods-Rural	Patgram— <i>Rural</i>	Mynaguri—Burel	Alipur—Barai	Kerat ti-Rural	Dhepguria, Salbare including, Falcata

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Decided Note of Other Control	•			RATIO PER 1,	RATIO OF DRATHS PROM- FER 1,000 OF POPULATION.	THE PRO	7.5	SANTARI B	SANITARY BETIMATES OF VILLAGES IN BACH CIRCLE UNDER THE HEADS OF	THE READS OF—
Revol 1,64,287 '00' 10' 21' 21' 11' 22' 21' 11' 11' 22' 21' 11' 22' 21' 11' 22' 21' 21	. :	Name of Circle.	-noitalugo4	.xoq-liamê	Pevor.	Cholera.		Drainage.	Water-supply,	Domestic cleanaing.
166,227 '006 1435 131 '035 Le sected by means of khale and mullahs. Is obtained from rivers, thals, mullahs and tam from the opposition of the Burgenge river; is much higher according to the convenience of the people. 12,661 6'13 8'27 2'86 Is tair. With a few exceptions, all the drains Is obtained from two reserved tanks, khale, an are kurche, but are kept in proper order. The villages comprised witche, but are kept in proper order. The river Sitel Lakbys. There are also numerated along some of the roads, and the system on private tanks, most of which are in a being gradually extended. 99, 09 1177 135 Some of the villages stand on brgh, and some one one one rinded with horder and resking with decaying regetation.			80,161	ρ	60.0	124	77	is very defective and unsatisfactory. There are no drains at all in several places, and imperfect ones at others which are allowed to set choked with rubbish, and are therefore on on practical seed uring a greater part of the year. The drainage outlets are in some cases not free. The condition of the house drains is very bad.	The town possesses an admirable system of water works, but it does not supply the want of the whole place, a third of which is still without filtered water. In the latter case water for drinking and domestic purposes is obtained from tanks and wells that are more or less open to polittion. The river water near the brick is necessarily impue from the various agencies incident to passage by a large town.	The conservancy arrangements continue to be very unsatisfactory. General cleansing is not properly attended to, and accumulations of rubbish and other oftensive matter are to be seen there and there. The surroundings of the houses are as a rate dirty. The public latimes are fairly well kept, but the present ones are manifestly insufficient to local troughences, and asperate ones for females, is very strongly indicated. The condition of the private privies, most of which are badly constructed, as allil very far from satisfactory. Some of the abountable well-privies and gors have been going in triving and still errity. The night-soil from the public privities and gond of the abountable well-privities may gone as can be cl-aned, are disposed of in deep trenches. Promiscours deforcation is still carried on. The arrangements under the heads of disposal of the deed and markets and slaughter-houses are as unsatisfactory as before.
are kutcha, but are kept in proper order. Lately pucca shallow drains have been proving private tanks, khals, as state and require to be gotrid of, term is being gradually extended. 91, 89	:	Koranişanj—Rural	1,64,287	940.	35.71	19.1	ģ	Is effected by means of khals and nullahs. The position of the thans, lying on the Daces side of the Burgunga river, is much hisher than that I pine on the opposite de between this and the Dhabswar river. The villages comprised within the latter are subject to annual inundations.	obtained from rivers, khals, nullahs and tanks according to the convenience of the people.	As a rule, the houses are grouped together and antrounded by deep trenches. Alled with waker, and overgrown with aquatic plants. The villages also abound in other thinky exactions. The growth of trees in and around the compounds of houses in very great. Burkace cleaning is sadly neglected. Those villages that are overcrowded have machans and other kinds of latrines, rudely built on khals, gore, &c.
91, 89 11.73 1.67 1.35 Some of the villages stand on high, and some case on low ground. The former are not hable from the rivers Lakhys and issuati, to it.undations. Most of the villages are riddled with holes and ditches filled with water and reeking with decaying vegetation.		Nataloganj – Tuvn	<u> </u>		6.13	23		With a few exceptions, all the drains truchs, but are kept in proper order. It puces shallow drains have been programs some of the roads, and the syssiong gradually extended.	Is obtained from two resorved tanks, klads, and the river Sital Lakbys. There are also numerous private tanks, most of which are in a foul state and require to be gotrid of.	The conservancy arrangements are, on the whole, very fair. Furface cleansing is well looked after, but fluid house refuse is nome cases improperly disposed of There is an excellent set of corrucated iron latrines of Horubary's pattern, but the existing ones are not sministent for local requirements, and more are wanted at places. The private latrines are still defective at places. The private latrines are still defective municipal mediters. The night-sell from both the public and private privies is buried in deep trenchen, she arrangements under the heads of markets and slaughter-houses admit of considerable improvement.
		Narsinganj – Rural	88.		£.11	1.67		Some of the villages stand on high, and some on low ground. The former are not hable to it undations. Most of the villages are riddled with holes and ditches filled with water and reeking with decaying regetation.	is taken from tanks and wells, and in some cases from the rivers Lakhya and Isamati.	The houses are kutchs, but in come villages they stand on raused dry floors. Surface elembing is almost nil. Houses-weeping, &c., are collected within the compounds. The cowheled are generally in a filthy state, and the small from these places, as well as from rotteny haystacks, is offensive. The Limitu dead are generally burnt, and also occasionally thrown into the river while the Mahomedans generally bury their dead in house compounds.

The villages generally consist of several groups of raised homestead surrounded by deep trenches, most or less filled with water. No conservency arrangements, fower dunk and other retuse waters are heaped up within house premises; where also the dead are buried in the case of the Mahounedans.	Is taken from tanks, bhils, khals and rivers. In The house plinths are generally raised, but are in some some places difficulty is experienced as regards. The computation in the bot season. Some of the computation; but the cow-sheds are mostly dirty: The people resort to jungles, &c., for detrocation. The Hindu dead are occasionally thrown into the river, but the Makemedana usually bury theirs within house enclosures.	Almost the same as in than Raipura, the sanitary condition of which is described below.	Many of the villages are thickly populated. The houses are in most instances well reised, and the couryards are kept fairly clean. The exceptances and the gors mentoned before are used as receptacies for all sorts of house-refuse. In many instances latries are built over them, and the night-soil is allow to accumulate, and puriefy there, thus converting them into hotbeds of malaria. The Mahomedans bury their dead in the compounds of their houses.	Many villages are covered with trees, jungles, and barr- boo clumps which obstruct air and sun. General conservancy is hadly attended to. The house surround- ings are generally divity. The Mahomedans bury their dead in the compounds of their houses.	Some as in Kawabgunge, but the manner of housing cattle and disposing of cattle refuser who same as in other thanas.	The houses of the people are generally badly constructed and ill-vertilisted. In many cases clumps of these grow around them and keep the rays of the sun from the surface of the soil. General conservancy is not much thought of. The house surroundings are dirty.	Ls hadly attended to. House-sweepings, &c., are allowed to accumulate and for in the compounds of houses, where, too, cow-dung is generally stored up for manuring purposes. Very few people has privies of their own; tieg resort to the nei-hbouring jungles and waste lands for purposes of nature. The Mahomedan dead are mostly buried within house premises.
Is taken from tanks, khals, and rivers. In some villages difficulty is experienced as regards water-supply.	Is taken from tanks, thiis, khals and rivers. In some places difficulty is experienced as regards water-supply in the bot season.	Almost the same as in Thana Raipura, the sanitary condition of which is described below.	Is derived from tanks and the rivers Megna, Dhalkeshwari and Pudica.	Is obtained from tanks, khals, and the river Dhaleshwari, Many of the tanks are foul and dry up in the hot season.	Many villages are situated on high ground, and Same as in Nowahganj, but it is also taken from are free from excusations, and consequently wells, the water of which is brackish. Surface drainage is not interfered with.	Part o this thana, consisting of Bhagulpur, Is taken irom tanks, khals, bhils, and the Dhal. Tarapur, and several other villages is higher than then the remeral. Iten than the comparatively level ground, are drained by means of khals and ditches, and are much drier than the other villages of this thaus.	Is senerally obtained from tanks, and in some is badly attended to, cases from the rivers Megna, and Hardno, to secumulate and the majority of the tanks are in a bad state, and where, too, cow-dumpint expepting is extensively carried on in the purposes. Very few latter river.
Is defective. Some of the villages are liable to be inundated, and as such remain water-logged for several months during the year.	Is fair in several instances, specially in the villages bordering on the Blawall jungles: the land being naturally undulating, higher in some places, and lower in others.	Almost the same as in thans Raipurs, the sanitary condition of which is described below.	Most of the villages are situated on a low level, and are consequently subject to annual inundations. They abound with fifthy holes, excavations, and gors that have been dug up for taking earth for raising plinths of houses.	Many villages are situated on raised chur land, which gradually stopes down towards the west. They are easily drained.	Many villages are situated on high ground, and are free from excusations, and consequently surface drainage is not interfered with.	Part o this thans, consisting of Bhagulpur, Tarapur, and several other villages, is higher than than a Gerangani. Here the villages stand on compretively level ground, are drained by means of khals and ditches, and are much drier than the other villages of this thans.	Is generally to the nearest ditch or hollow, which abound in the villages. The general level of this part of the country being low, some of the villages are subject to armuni inundations of the rivers Megna and Haridhoa.
951	3	40.	2.03	5.83	15.	108	8
5.33	5	05.3	94 99	2.3	1.79	2.7	5. -
15.58	19.63	18.68	10.03	57.9	13.90	13.83	tr.11
	25.	함			1	6.	
1,54,196	119,515	164,159	243,463	275,994	100,009	174,831	\$02,738
Manikan j — Anzal	Kapasia—Rural	Rupganj-Reral	Munshiganj – Rural	Stinegar—Bural	Harirsmpur—Bural	Shebbar - Rurof	Balpura Rural

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Name of the train 19.25 19.2	•	,		RATIO PER 1	or Det	RATIO OF DEATHS FROM- FER 1,460 OF POPULATION	74- 19X.	Slyitar e	SLVITARY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	THE HEADS OF-
Newlocatis 19.25 1.1 1.55 1.5 1.1 1.5	District.	Name of Civity.	-not)rludod	Burall-rox.	Fr vur.	Cholera.	Bowel-com-	Drainsge.	Water-supply.	Domestic cleansing.
Astronum 18,233 99 6.23 294 3 strong have thely been improved the vester. In their from this and the virtue, both of which the various pasts Research 10,233 99 6.23 294 3 strong have thely been improved the vester. In the mother hand, and the vester provided hand has been described been the very post of the sail of the same pasts Research 10,235 172 172 172 172 173 174 174 174 174 174 174 174 174 174 174 174 174 174 174 174 174 174 175	:	~	.e.	:	10.27	L.s	9			cs generally stand on raised flood by trees and he besternet the free passace of air ar nick are often dirft, and bouses, lected within many of them, a in junctes and other conveniented an dead are mostly buried in
Faridpur—Zuen 10,233 '''' 6'''.3 ''' 2''' 1'' 1''' 1''' 1''' 1''' 1'''		(Jaffergunj – Rural	143,612	i	18.90	# 6	ē	1	the villages in this thana is yet available.	
Faridur-Zaral \$\epsilon{a} \text{Faridur-Zaral} \tag{1.38} \ta			The second secon		85 .9	85 85	\$5 61	has lately been improved the waters freely through the various parews. By through the various parews, many of them sile up during, and have to be opened out any very year.	le taken from khals and the river, both of which have much silted up at places. There is theredure considerable searciff of good drinking-water during the 'iy season, (hiy five fairly protected tanks better after to the Municipality have been reserved for drinking. There are numerous private tanks that are, with a few exceptions, in a very bad state. Some of these require re-excavation and some filing up	The cruserrancy arranesments are defective. The establishment being rispured chemising is importedly carried on and much filth and rubbish remain unremoved here and there. The solid and fluid refuse from the houses are in most cases disposed of within the compounds; where, too, dury, &c., are stored up for manuring purposes. There is only one public latrine, and more are required at convenient places. The private private are cleaned by municipal rachters. Some daily and some every other day the night soil from the public and the private private is buried in deep trenches, which is objectionable. Moreover the present tremching ground is in no way suitable. It is within too short a distance of the public school and the site is also so low that it remains under water for at least three months of the year. The arrangements under the head of disposal of the dead are very unsatisfactory.
190,857 1991 '95 '04 Some of the villages are situated on high and Is derived from tanks, bhils and the river Kumar. some of the fillages are liable to felt.		Faritzur—Baral			6:	-	.00	-is as usual defective. Reveral villages are structed on char land and are thus subject to annual inundations which sometimes submerre the court-yards of the houses.	* Is taken from tanks, large bhils called baors, and the river Bhubaneshur,	Little attention is paid to personal and general cleanis. The house compounds and the cowabeds are generally very dirty. Among other places the village roads are sometimes used as latrines. The Mahomedan dead are usually buried within house enclosures.
199,257 10.91 '95 '04 Some of the villages are situated on high and Is derived from tanks, bhils and the river Kumar. some rilages are liable to felt, inundations,		l		ļ	13:87		77.	٠	f the villages in this thana is yet available,	
					10.91		70.	Some of the villages are situated on high and some of the villages are fairly well drained. Some villages are liable to inundations.	Is derived from tanks, bhils and the river Kumar. In some villages want of good water is severely felt.	The houses generally stand on raised, but in many cases damp floors and the spaces around them are often covered with trees and bambon clumps. The compounds and cowsileds are mostly dirry. Little attertion is paid to conserrancy matters. The Mahomedan dead are usually buried within house premises.

			CXXIX	•	[App. V.
The house floors are in some cases raised and in some cases not, and are generally rather damp. Fone rilages are densely shaded by trees bambo clamps and jungles, which prevent free perflation and drying up of, the surface. The court-yards are somewhat clean, but house surroundings are often very filtly. In some villager middly constructed privies are used, but the soil is never removed from them. Burials within house premises are usually carried on by the Mahomedans.	Many villages are densely covered with trees and jungles which give shelter to wild hogs and other animals. The dwellings stand on raised but rather damp floors, and are in many instances crowed together and badly bung and house-reluse are heaped up within them, sometimes on the surface and som-times in pits dug for the purpose. No attention is paid to conservance matters, and the people seem to have no idea of the arvantaces of cleanlines. The condition of the cow and cattle sheds is bad. Defocation is carried on at all convenient places. The Mahomedau dead are usually buried within house compounds.	The floors of the houses are raised and dry. The spaces around the premises are rendered very sirry by throwing house-retuse into them. The cow-sherts are often in a fithy state. The people do not build privies, but resort to juncles, &c., for purposes of nature, Internents are carried on in house compounds.	The homesteads are generally web built without due regard being and are often surrounded by deep ea made for taking earlt, but many mored regitation. The compounds shouse refuse, &c., being disposed of Mahomedans usually bury their of mises.	The house pluths are generally raised, and are in some raises dry. The compounds are mostly very dirty dung and house refuse being disposed of within them. Conservancy almost nil. Some people use rudely built privites from which the fifth is never removed, while the great majority of the inhabitants exest themselves wherever they like. Creation is generally extried on at convenient places, but in some cases a six done within house encloures during the rainy season. The Mainomedan dead are always interred within house premises.	e The houses generally stand on taised dry floors, but are rather crowded together, obstructing rentilation. The compounds are small and very dirty. Dung and house sweepings are in most cases accumulated within them. Very little attention is paid 40 personal cleudiness. The clothes worn by the people are literally saturated with oil and dirt. The people defocate wherever they like, even the village footpaths are sometimes that like, even the village footpaths are sometimes fould. The Hindu dead are occasionally cremated as a rule bury their dead in the compounds of their houses.
Is taken from tanks, wells khals, and the rivers Bhitbaneshur and Arial Khan.	Is taken from bhils and the river Kumar, and sometimes from tanks. In several villages there is great difficulty, as regards water supply. Holes are temporarily dug in low places and hollows, and the water obtained from them is used for washing and other purposes, but not for drinking or cooking purposes.	Is from tunks, a khal on the west, and the river Kumar.	Is obtained from tanks, bhils, khals and the river Kumar. In some villages the want of good water is considerably felt.	Is taken from tanks and khals, the latter receiving tidal water in many cases. In some rillages considerable difficulty is experienced as regards water, upply in the hot season, when most of the khals dry up.	obtained from tanks, nalas, khals and the rester Madhumati. In some places the water upply is deficient.
Is fair in some villages and generally bad in those that are situated on char land. In the latter case the villages are lable to inundations and starnation and water-logging occur.	Surface drainage is greatly interfered with Frhoses and diffeles and other exestations. Some of it, villages are liable to be annually mundated.	Is generally fair, and flows towards the Kuneer mad. At places, however, it is much interfered with by holes, hollows, and nalas. Some of the outlying villages are subject to inundations.	Is obstructed by deep hollows and excavations. which are very numerous. Many villages are situated on chur land and are subject to annual inundations. Several have no roads at all.	This thans forms the lowlands of Paridpur, and abounds in kials, nales, hollows and ditches. Some vil ages are situated on swampy ground and are damp, while many of the others become completely water-logged during the rains.	Plows generally into the neighbouring holes Is and naiss. In some cases it is effected by means of naiss and khals, some of which are tidal. Many villages are situated on low ground and become completely water-legged during the rains; some, with the exception only of the homesteads, remaining under water for a considerable time.
:3	충	韓	ä	Ė.	2
20 20 20		3 .	\$15	8	4.7
10-06	18.6	87.8	10.41	50	90 60
900.	i		-	3	
164,889	186,938	12,298	168,619	66,163	86,341
Bhanga – Barol	Makeudpur—Ru <i>ral</i>	Maderipur – Town	Madaripur – Rural	Kotalipara – Zuroi	Gopalşanj – Rarof
		Paridpur	* .		i

	-		RATIO PER 1,	RATIO OF DEATES FROM- PER 1,600 OF POPULATION.	THS FRO	OM-	SANTARY E	SANITARY RETINATE OF PILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	THE HEADS OF-
Pretrict.	Name of 'ircle.	.noitMuqo4	-xoq-lism?	Рече т.	Cholera.	Вожеј-сош- рјанца,	Drainage.	Water-supply.	Domestic cleansing.
	Shibchur—Rural	116,048	16.	7.61	80 80	21.	Surface drainage is seriously obstructed by Is deep pits and exercations. Some of the villages are liable to inundations, and become water-logged during the rains.	Is obtained from tanks, wells and the river Arialkhan.	The homesteads are generally raised, but their floors are rather dawn. Manf houses are dense's covered with trees, bumbos clumps, and jungles. The courtwards are kept somewhat clean, but the spaces around the houses are an most rases very fullty. Wardan and the being allowed to accomulate in them, while the great majority of the people recort to jungles and other convenient places for parposes of nature. The Mahomedans bury their dead within the compounds of their houses.
·	Palong - Burai	256,250	i	9 21	£.	97.	No special account of the sanitary evalition of the	neconnt of the sanitary addition of the villages in this thans is yet available.	_
Feridpur	Goalundo—Rural	106,050	60.	80.8	4.66		Some of the villages are situated on elevated. Is and some on low ground. The latter are listly to the inundations of the Pudda river, and become much water-logged during the rains.	Is taken from tanks, wells and the river Puddla. In some rillages there is considerable difficulty as to water supply.	The bruges generally stand on raised floors, but are in most cases badly ventilated and surrounded by trees. Conservancy almost mit. The compounds are dirty, and often contain heaps of rubbish, dung, &c. Promiscuous defenear in a carried on at places convenient to the people. The Mahomedan dead are usually burned in house compounds.
•	Pangsa - Rural	150,366	i i	 	1.59		Flows towards this, river, and the rice-fields In according to the situation of the villages, and is, as usual, defective in the case of the low-lying villages, most of which are subject to inundations.	Is obtained from tanks, wells, bhils and the rivers Chaulana and Chatara.	Is obtained from tanks, wells, bhils and the rivers The bouses are generally well raised, but are often surrounded by trees which considerably obstruct the passase of air and light. The courtyards themselves are in many instances clean and dry, but the spaces are in many instances clean and dry, but the spaces around them are used as repositories of all sorts of filth and house-refuse. Befocation is carried on wherever convenient to the people. The Mahomedan dead are usually buried within house enclosures.
	Baliakandi – Bural	62,069		18:01	10.	នូ	No special account of the sanitary condition of the	account of the sanitary condition of the villages in this thans is yet available.	
Backergange.	Burisal—Town	13,136		96.2	21. 20.	1.85	Is on the whole fair, and is effected by a number of tidal kinks which intersect the fown. The side-drains, which are, with two exceptions, kutchs, and generally deep, are connected with the kinks, and are thus flushed during the cub-tide and kept fairly clean. Some of the drains occasionally silt up and have to be re-opened.	Is from the river Barisal and from tanks, most of which hold most rere water. One or two tanks are specially kept for druking, into which river water is not introduced.	The conserrancy arrangements are not what they should he. Surface cleansing is sairly well attended to. The fluid refuse from the houses is not properly disposed of, but thrown somewhere within the premises. Cowing is also accumulated within house companies. Cowing also accumulated within house companies for manuring purposes. There are three public alarinas, but these are quite insufficient for local requirements, and more are wanted at places. The private privies are attended to hymmicipal methers and they fartened to hymmicipal methers and they private privies is buried in shallow franches. The private privies is buried in shallow franches. The arrangements for the disposal of the deal are arrangements for the disposal of the deal are arrangements.

Is obtained from tanks, khals and the Tengra had. Evenine almost dry at ebb-tide. The tanks and ponds are pointed in every way. Proceedings are pointed in every way. The house plinths are green and for the compounds are in some cases spacious, but are full of the compounds are pointed in every way. The house plinths are green and dry. The compounds are priors of word or hamboo placed can be placed of trees, and marchan, as privite, while others resert to fields and inneies for defraction. The dead are either burnt on the banks of khals or burned within house enclosures.	Is obtained mostly from tanks which do not, as a The same as in thana Perozepur described below, with rule, receive tidal water, and are not in fair order. Also from khals, which, however, are seldom reserved to fur fear of the crocodiles that infest them.	this thana is yet available.	Is taken from tank, which are numerous, but The habits of the people are filthy. Houses as in Mennone have been reserved exclusively for drink. diignal, "Thick junge abounds, and, to chariate the ing, and sincest all are polluted in the usual way, great dampness of the place, the houses are raised on pinth, by the existence of trees, and their hearts, and by defoceation taken them from Mendhiganj rural described helow. There are nuoverhanging branches of trees during the rainy stagnant water. The dead cattle are treated in the same way as in Burgal.	his thana is yet available.	Is obtained chiefly from the tidal khals and also from tanks which, as a rule, receive tidal water. If the khal water becomes brackabin the middle in groups of three, four or more houses, and of December or the beginning of January, and trees, which greatly interfere with free perflation of air ann drying up of the surface. The courtwards are daily mixed together, and the freehold with covedung and earth mixed together, and the freehold with covedung and earth while some distance from the bouses on the sides of the khals or in small pits close by. The people resert to purposes of nature to the most convenient places. The halfs of their houses, and sometimes on the busks of tanks.	Is from tanks and rivers. The water from the General conservancy is bad, the establichment enter-latter may be advantageously introduced into tained to look after it being inadequate. Much rubthe former.
Is obtained fr khali nadi. E become almos ponds are pol	Is obtained morning, receive the Also from khis sorted to fur them.	the villages in	Is taken from none have been ing, and since and, in additing in their by interment their banks, overhanging is season.	the villages in t	Is obtained chi from tanks w The khal wat of Decenter remains so till	Is from tanks latter may by the former.
Is in some places affected by khals and nalas. Some villages are liable to inundations, but the majority are situated on a comparatively-high level.	Is almost the same, but rather more defective than in Perozepur rural described below.	No special account of the sanitary condition of the villages in this thans is yet available.	Drainsse is defective. The ground being low, the villages are always inundated.	No special account of the sanitary conditions of the villages in this thena is yet available.	Is effected by narrow drains like khals, most of which receive tidal water throughout the year. Many of the villages are sinuated on low ground, and are more or less submerged during the rains, when the water enters even into the courtyards of houses.	Is defective. Some deep and square-shaped puces drains have been constructed, but they are without proper outlets, and with parts independent of one another. They aggenerally full of rubbish, and in some case slush. A regular drainage system for the town is regular drainage.
10.	28.	12	01.	3	Ş.	3
7.50	2.83	• \$-01	68.5	11.24	80.8	1.61
26.78	13.86	1.38	89.98	81.98	11.78	7.03
10.	80 .		70.	3	11.	i i
113,733	95.188	8,653	75,308	3717	118,192	4,968
Buries I - Zerrol	Bowphal-Eara?	Nalchitti-Town	Nalchitti— <i>Rural</i>	Perozepur—Town	Pervæpur – Zurel	Jialokatı—Toum

1			RATI.	0 00 0E	RATIO OF DEATHS PROM- PER 1,040 OF POPULATION,	OM-	BAYITAR .	SANITARY ESTIMATE OF VILLAGES IN EACH CIECLE UNDER THE HEADS OF-	в тия пбарв от-
•	Name of Circle.	Population.	sxoq-flame	Гечег.	.ertelcrio.	Bowel-com-	Drainage.	Water-supply.	Domertic cleansing.
-	Jalokati—Rural	138,446	\$	19.38	E .	72.	Almost the same as in that a Perozepur decribed above. There are numerous khals, and communication from house to house is carried on in boats or bamboo rafts.	Is taken from small narrow khals, which are numerous. The supply is bad and insufficient. In addition to the usual modes of defiling water, careasses are east into the khals, and people defences into them from overhanging branches of trees, and bury their dead on their bank.	The houses generally stand on raised and but partially dry plinths, and are in many cases surrounded by eccount, betel-int and other fruit trees and jungles, which considerably obstruct air and light. House reliase, &c., are not groperly disposed of, but are thrown somewhere within the compounds, which are mostly dirty. The people generally use branches of trees overhanging khals, galas, &c., as privies; the soil heing allowed to accumulate unless washed away by the tida-s. Burials are usually carried on within house enclosures.
	Bhandaris—Rural	73,362	ä	15:37	9.70	្ន	The same as in thans Perozepur described above.	thans Perozepur described The same as in thans Perozepur described above.	The same as in thana Perozepur described above, with this exception, that the house compounds in this than are dirtier.
	Barhanady—Rural	190'69	\$	22 08	1.73	1.	Particulars regarding the sanitary condition of the villages in this thans are not yet available.	the villages in this thans are not yet available.	
-	Golaclipa - Rural	59,037	8.	20.41	7.22		Is almost the same, but rather more defective than in thans Perozepur described above.	The same as in thans Bowphal described above.	The same as in thana Perozepur described abore.
:	Gonradi – Rural	184,192	10.	15.63	1.57		Some of the villages are situated on high and some on low chur land. The latter are liable to ir undations. The drainage of the former is pretty free; that of the latter is not.	some of the villages are situated on high and 15 taken from tanks, tidal khals and rivers, but some on low fully limited to little and carcasses are thrown into their. It forms is pretty free; that of the latter is not.	The dwellings consist of straw-built huts, and stand on dry floors. The compounds are mostly dirty and unsidy, and have house-sweepings, &c., thrown into them. Very few people build privies; the greet majority case themselves in jungles and other convenient places. The Mahomedaus bury their dead within house compounds.
	Mendhiganj—Bural	146,711		14.52		<u>.</u> §1	Is defective and much interfered with by hollows, ditches and nalas, which abound in many villages, and which are more or less overgrown with rank vegetation. Several villages are situated on low land, and are liable to inundations.	Is taken from tanks, khals, and the rivers Jayanti, Ariakhar, Merna, and Krishnagani. Many tanks dry up in the hot season. In some places the recpie complain of the deficiency of the watersupply.	The houses are in many places crowded together, and their front portion is often brought down so low as to seriously obstruct ventilation and passage of light. Their flores are raised, but are, as a rule damp. The people are fithy in their habite. The compounds are mostly dirty (specially those in which oil-milis are mostly dirty (specially those in which oil-milis are mostly dirty (specially those in which oil-milis are far thrown about the premises. The people use thrown about the premises. The people use tranches of trees as privies. Burials are usually carried on in house compounds within which cremation to sometimes takes place.
	Backerpanj—Eurol	135,396	ş	88.08	98.9	97.	Almost the same as in Mendhiganj described	Is taken from rivers and tanks. Dead cattle are thrown into the former, and the latter are in a bad condition. Cremation and interment take place on their banks.	The habits of the people are filthy. Houses as in Mend-higan; jumple abounds. Some of the ditches contain vegetation and putrid water. Conservancy, disposal of sweepings and refuse, and deforcation same as in Mendhiganj. Dead cattle are treated in the same way as in Burisal.

Is taken from tanks, tidal khals and rivers. No The houses are in many villages scattered, and have spacious compounds, in which are grown fruit and other trees which materally obstruct air and light. Their floors are generally raised. Conservancy almost anit, The house surroundings are mostly filthy. Some people use material and are served to Beids. &c., for defencation. The dead are generally furnit or bursed at the outskirts of villages and in banks of tanks and khals.	same as in thana Bowphal described The same as in thana Perozepur described above.	Adhumati. Madhuma	sume as in thana Bowphal described The same as in thans Perotepur described above.	same as in thana Perezepur described The same as in thana Perozepur described above.	Is taken from wells, khals, and the rivers Brab. General conservancy is imperfectly attended to. The magnitra and Jhenai. Two wells have been lately constructed and reserved for drinking. The police is true which was burnt down last year lately constructed and reserved for drinking. The proper disposal of night-soil from the public and the private privies.	the sanitary condition of the villages in this thans are not yet available.	Is taken from the river Narsunda, which, however, the santary condition of this fown is bad. Surface is reduced to a chain of pools in the cold weather. Even in the height of the rains it is choked with the request of the rains it is choked with the request of the rains it is choked with the request	Is taken from tanks, khals, bhils and the river. The bourses are in many cases fairly well ventilated, and Brahmaputra. Brahmaputra. Denomic are somewhat clean but dunchills are to be the but dunchills are to be the but the content of the but the but the beautiful to the but
Is generally defective, and is much interfered for the with by holes, nalas, gors, and other excessions. In some places it is effected by means of kins. Many villages are situated on low churland, and are subject to inundations.	Is almost the same, but rather more defective The same than in thana Perozepur described above.	Is in some cases fair, and is effected by means [8 cbts of khale and nalas, most of which are tidal.] Madhi several wilsges are situated on low land, and are subject to annual inundations.	Is almost the same, but rather more defective The sur than in than a Perozepur described bove.	The same as in thana Perozepur described The sa above.	Is fair and flows towards the bhils and the Is taken rivers. The drains are kept fairly clean lately	Particulars regarding the sanitary condition of the villa	Drainage is defective. The kutcha drains Istaken carry off only a portion of the water to the Bren Sarsunda river and the bhils. Narsunda river and the bhils. The geren The always casting the salways casting provints.	Is generally defective, and in many instan- Is taken ees much obstructed by holes and dobes. Brahn some villaces are situated on clur land.
<u>.</u>	\$1 \$1	1 91.	\$5	7.7		61.	<u> </u>	35
4	7.66	, fi	7-39	6.20	1.8	89.	85 85 87	176
81.51	13.60	60.21	15.63	14.10	16.03	12.66	87.3	12.82
.	ů,	5	ş		\$	93		
	173,801	160,294	98,738	96,032	16,091	188,238	12,898	123,705
Blots-Kwret	Patuskhali - Rurol	Sbarupkhati - Bural	Gulishakhali — Rural	Natharia - Rural	Jamalpur—Town	Jamalpur—Rural	Kia horeganj – To 1078	Kishoreganj – Bural

			RATIO PES 1,4	RATIO OF DRATHS PROK-	FUS FRO	C.	PANTABY	SANITARY BSTIMATE OF VILLAGES IN BACH CIRCLE CHDER LHE HEADS	THE BEADS OF
District.	Name of Circle.	Population.	.xoq-llemë	F6767.	Cholera.	Bowel-com-	Drainage.	Water supply.	Domestic cleansing.
•	f Tanjhail—Buras	811/377	\$	9 20	8	å	The villages that are situated on elevated ground are fairly well drained and are dry. In the case of the others it is defective. Some of the villages are liable to inundation.	on elevated is taken from tanks, khals, and the rivers Jumuna and are dry. and L.hazung. In some villages there is great setive. Some difficulty as regards proper water-supply.	House floors are generally raised and dry. There are few trees in and around the houses, so perflation of air is free. The compounds are small and dirty, and dung is arcumulated near cow-sheets in the rainy season, being only occasionally used as fuel, but rarely as manure.
·	Nasirabad Toors	10,561	:	1.0	Ŀ		Is very defective. In August the greater part of the town becomes water-legged and quite swampy, making he houses and their survenance very damp. Most of the drains are kutchs and have insufficient Catall. A complete scheme of drainage is to be gradually carried out.	Although the river old Brahmaputra runs past the town, the people prefer to take their water from stagmant tanks, some of which are recerved for drinking purposes, but others are also used which are in a bad condition, bring generally covered with vegetatin during the hot season. The banks of the river all along the from reciteding the length of the civil station, are used for defocation. Private privies also line them. The present water-stapply is very deficient in places removed from the river.	The conserrancy arrangements are in some respecta still very defective, the establishment being insufficient, four-see cleausing is very imperfectly done, and the town is full of unremoved rubbish and cowdung. There are three puces and true interest public latrines that are in fair more of these conveniences are required at places and separate ones for females. The private private and tended to by municipal mebitons. and kept tolerablishment ones for females. The private private are disposed of in shallow trenches. The arrangements under the head of markets and slaughter-houses are fair, but those markets and slaughter-houses are fair, but those markets and slaughter-houses are fair, but those markets and claughter-houses are fair, but those markets are concerned, continue to be very unsatisation.
Mymensingh	Muktagacha – Town	26.	1	10.21	, in	Ş.	The general level of the town being low, some places remain submerged during the rains. The readside drains are defective. Some are too shallow and some too deep to serve in their purposes purperly. Some roads have no side drains at all. An improved system of drainage is required here.	Is taken from tanks, wells and the river Aima, Only one tank has been reserved for drink ing. The others are generally covered with decaying vegetation, and are in a more or less foul state. They banks are also largely fouled. Some more tanks require to be reserved for drinking tank. The wells are imperfectly protected from pollution through their mouths.	There is no arrangement for the proper disposal of sewage and hone rubbish which are collected any where correnient to the owners. The cow-sheds are mestly fifthy, and dung is accumulated within the premises, where it rots till removed for manuring purposes. Lately one public latrine has been provided, but it is not k-pt clean. More of these conversales are required at places. The conditions of the private privies was not astisfactory. The soil from these places are buried anywhere. The arrangement under the head of markets and slaughterhouses are defective. The Hindus burn their dead on the bank of the river Aims, while the Mahomedans bury theirs near houses.
	MymensingBurat	867,890	, 5 ,	16.53	1.08	35	Is detective. Some of the villages are situated on hish and some on thur land. The latter abound in bhils, dobas, &c., that are nothing more than depressions in the old abandoned bed & the Brahmaputra. Some villages have roads, but without side-drains.	Is derred from tanks, wells, bhils and the rivers Brahmaputra and Maltan.	The dwellings of the people are scattered, have slight- ly raised floors, and are dry when not shaded by trees. The compounds are, as usual, dirty, and durighlish are to be seen in nost of them. In some villages the people have private latrines, some of which are proves and some are rackey puilt over sort, are, the filth in the latter case being allowed to accumulate in them. The Mahomedan dead are generally interred within house enclosures.
	Fulpur - Baral	114,467	Ģ.	15.58	69.	ıŕ	Particulars regarding the sanitary condition of the villages in this thans are not yet available.	the villages in this thans are not yet available.	

Isvargenj—Rsral	559,462	ŝ	19.62	16.	- 5	Is fair where the villages are situated on the Is banks of rivers. The villages in this than are not usually subject to inundations.	obtained from tanks, bhils and the rivers frahmaputra and Anniar.	The house pluins are generally raised, but somewhat damp. The compounds are small and dirty. Conseervancy nil. The Mahomedans bury their dead in house compounds.	
Guffergaon – Ruras	117,759		14.55	81.1	1.	Some villages are situated on high and some to no low land. The former are not subject to inudutions, and the drainage from them is somewhat fair. Some villages have loads, but without side-drains.	Is taken from tanks, bhils, khals, and the rivers I Brahmaputra and Bankheru.	The houses generally stand on raised dry floors, and are in many instances fairly ventilated. The compounds are unitdy. Cowdung us, however, mostly removed to the adjoining fields. The people deforate in waste lands and other convenient places. Burish are carried on within house enclosures.	
Sharpur - Kural	187,065	10.	90.8	- 3 3	1.13	Many villages are situated on high ground, I and the drainage from them is fair. They are not liable to inundation.	Is taken from tanks, wells, and the Sheri nadi. I Asa rule, well water is of good quality.	The floors of the houses are generally raised and dry. The courtywride are kept fairly clean, and cowdung is in many instances properly dispused of. The house surroundings are, however, often filthy and covered with low jungle. The people do not build privise, but defence to find fields and other convenient places.	
Dewanganj— <i>Rural</i>	101,372	600	19-95	1.00	%	Particulars regarding the sanitary condition of	s regarding the samitary condition of the villages in this thana are not yet available.		
Bazitpur—Ivon	19945		7.32	1.20	1:50	Is fair and is chiefly effected by the khal which passes through the town. The sidedrains are kept fairly open.	Is from tanks and the khal. There are numerous private privies on the banks of the latter.	General conservancy is bedly looked after. The condi- tion of the private privies is unsatisfactory. A few hance have lately been opened out through some of the most densely populated bastis, and much jungle has been removed.	UAAAV
Batitpur—Rurol	204,617	* 00.	95.8	85 52 53		Many villaces are situated on low land and are subject to inundations. Some villages have roads wiften serve the purposes of drains.	Is obtained from tanks and rivers. Most of the former are open to pollution and are in a best stake.	The floors of the houses are generally raised and dry. The compounds are drift, No conservancy arrangements exist. The Mahomedans usually forry their dead within house enclosures.	-
Nickli-Bural	12,489		18.71	99	1.08	Most of the villages are situated on high ground, and are not usually lishle to inunda- tion. There are, however, no khais, &c., to drain them.	Is taken from tanks and the river Dhanu. No further information furnished.	The houses are kutchs, but stand on fery raised floors. The courtyards are kept clean, but beyond this conserrancy is nil. Junsies and other convenient places are resorted to for purpose of nature, the fifth being disposed of by natural acencies. The Mahomedan dead are generally buried in house ormpounds.	
Pingna—Bural	76,263		83.5%	2.16	è de la companya de l	Is defective, except where the rilbares are situated on birdh ground. Some of the vilbares are liable to be annually inundated by the river damuna.	Is taken from wells, bhits, and the rivers Jamuna and Sarasuti.	The home floors are generally high, but are rather dame. The compounds are small and dirty. Conservancy nil. Hurials are carried on within house enclosures by the Mahomedans.	•
Gopalpur—Barat	217,736	\$00.	19.01	\$.25 \$	16	Some of the villages stand on high land, and are fairly well drained. In some drainage is very defective.	Is obtained from wells, khals, and the river Jamu- ns.	The house plinths are generally somewhat raised. The compounds are filthy; dung, ashes and other refuse matters are heaped up within them. No conservancy arrangements. I he Mahomedan dead are mostly buried in house compounds.	

			RATIC PER 1,	RATIO OP DEATHS FROM- PER 1,000 OF POPULATION.	OPULAT	OM- ION.	SANITABY	SABILARY ESTIMATE OF VILLAGES IN BACE CIRCLE URDER THE HEADS OF-	I THE READS OF—
District.	Name of firele,	Population.	Small-pox.	FOVOT.	Cholera.	-moo-lowofl shrints.	Drainago.	Water-supply.	• Domestic cleansing.
•	Netrokons—Town		Data no	Data not available.	ble.		Is defective, and flows towards the Bheki bhil Is from dobas, tanks, and nadis and the Shnai madi. Some of the outlying villages are subject to inundations.	Is from dobes, tanks, and nadis	The house floors are mostly raised and dry. There are very few trees around the premises, and consequently perflation is general y free. The courts are kept clean, but the compounds are very driver. In some of the latter there are holes in which house sweepings, &c., are shown. Footpaths are used as latrines. Hurials are carried on within house enclosures.
	Netrokons - Esrai	471,658	20.	27.6	1.70	Şī 		Some of the villages are situated on elevated is taken from tanks, bhils, khals, and the rivers and some on low bhil land. The crier are lable to be inneared. Many hecone waterlines are some villages have reads, but without ade-drains.	The houses are generally dry and have raised plinths. Their surrounding sace, however, dury, and house-refuse and cowdung are mostly collected in the compression of the popular of the fields and june. The base themselves. The Mahomedan dead are mostly buried within house compounds.
	Durgspar - Rural	116,457		10-97	800.	*	Particu	lars regarding the sanitary condition of the villages in this thans are not yet available.	-
	Comillah Toom	. 19 506	3	15.5		-	of Designation of the formation of the factor of the facto	A for taken form to the beautiful the sine of the sine	The same succession and same fair Surface alones.

The conservancy arrangements are fair. Surfing in gis properly lovied after. Sweepings and employed in filling up holes and differe, of we are many: but find retuse from houses is the name of the name of the name of the peopprise that are largely used by the peopprise that are largely used by the peopprise. There are no well-privies. With trenched, but in deep pita. Promiscuous are common. Cassigis are no well-privies. With trenched, but in deep pita. Promiscuous are crossing rayes in and near the compounds and new ones are allowed under special circus Blauchte: ing of castile takes p.ace in the premiur	The dwellings are kutchs and straw-built, but he dry floors. Some villages have shallow did around them which are full of foul water, and decomposing vegetation is very freat. Generatory almost seif. The compounds are months of the proposition of the compounds are months of the proposition of the compounds are months of the compounds are months of the compounds are months and jungles. The Mahomedan of either buried within house premises or of tanks.
Is taken from tanks and the river Gumti. There is one tank containing good water, reserved for drinking purposes, and rearded from pollution, which is recorded to by the Europeans and the majority of the natives, residents of the fown. Some of the other tanks also supply good water, which is, used both for drinking and culinary purposes. The water of the remaining tanks, about 440 in number, is fit for no purpose.	Is obtained from tanks and khale, and in some cases from the river Gumit.
Drainage is very defective in some places in the native quarters; in other parist it is fair. The outfall is towards paddy-fleids on the south-west of the station, where the waver escapes into navigable nullahs and khals further on. The drains are both purca and kucha, and are generally kept open.	Many of the villages are situated on elevated ground, and the drainage from them is fair. They are not usually liable to inundations.
	•
e.	1.64
14:61	£ .
* 8	•
. 13,506	125,679
Comillah—Tours	Comillah – Baral
i	· -

There are from which is ge number of a clean condi- buried close structed over structe	ised and dry. of trees and frees and frees and dung- beggestion is people. The fittin bouse	raised floors, relead floors, e elemains is mostly dirty: in them for uild latrines, te isnds and medan dead or in public at a distance	by trees and like decaying like decaying like decaying west. Jungles at to by the like of but he like decay withing of on within	e compounds se are heaped du many con- privies. The and courts,	ry, but their rule, the pro- iles and other Burials are	are in some obstructed by ded together, one cases the ring pieces of
Surface cleansine is fairly well looked after. There are only two public latines, the might-soil from which is buried in their vicinity. There are a large number of private privies which are not always in a clean condition, and the mixil-soil from these is also buried close to them. Most of these structures are constructed over drains and hollows. Interment and evenation take place out of town.	The houses are furthel, but their floors are risise, and dry. They are generally surrounded by masses of trees and jungles. The compounds are as usual dirty, and dungling are to be found in many of them. Defiguation is carried on wherever convenient to the popule. The Mahomedans usually bury their dead within house enclosures.	The dwellings of the people are kutchs with raised floors, which are in some cases damp. Surface cleaning is never looked after. The compounds are mostly dirty: sakes and other house-tiene are collected in them for usanuring purposes. The people do not build larines, but resort for defeacation to fields and wave isnds and ache out-of-the-way piaces. The Mainmedan dead are burred either within house enclosures or in public hurisl-grounds that are generally situated at a distance from the houses.	The houses are generally surrounded by trees and juncles, and the compounds are full of fallen decaying leaves, &c. Dung and all sorts of house-relues are heaped up within them for unanuring purposes. Jungles and other convenient places are resorted to by the of tanks, not excerting even those from which dranking water is obtained. Burgls are also carried on within house enclosures.	The floors of the houses are generally reach restriction is in some cases defective. The compounds are dirty. Cowdume and other house-relians are heaped up within them for manurung purposes, and many contain filth dolons. Very few people build privies. The Mahomedan dead are buried in compounds and courts, and sometimes even in the dwelling-houses.	The houses are generally well raised and dry, but their surroundings are in most cases dirty. As a rule, the people do not build prives, but resort to implie and other convenient places to case themselves. Burials are usually carried on in house compounds.	The house plinths are generally raised, but are in some stress damp. Perfaition free when not obstructed by trees, or when the houses are not crowded together. The compounds are small and dirfy. In some cases the people build a rude hind of privy by throwing pieces of such pieces of such pieces.
taken from 25 municipal tanks. Care is taken to keep them clean, and their water is said to be generally good,	Is taken from rivers, khale, nalas, bhils and tanks. In some villages the supply of water, is not sufficient for the requirements of the people.	Is from and Meetins. In meny villages the steeping of jute is larrely practised in khals, old tanks, dubas, &c., but the water in them is not used by the people for any other purpose.	Is taken from tanks and khale. Several of the former are overgrown with weeds and are in a bad state.	Istaken from tanks and dobas, many of which are overgrown with weeds, and also from bhila, khals, and the river Guudi.	Flows generally into the adjacent holes and is obtained from tanks, klass, and the rivers differes and khals. Some villages are subject Gumti and Titas. Water scarcity is selt in some places during the hot season.	Is taken from dobas, tanks, khala, and the river Megna.
The drainage is fair. There are a large number of main and cross drains which empty themselves into the river. Thiss which runs pas: the town, and into a khal which runs through the town. The drains appear to be provinced with sufficient culverts and stoneware pipes.	The villages of this thans, lying between the B.mraii and larms rivers, are situated on high ground, and the drainage from them is therefore, free. The villages are generally dry and have very few holes and executions.	Plows generally into neighbouring dobas or ditches. Some of the villages are situated on elevated and some on chur lands. The latter are liable to inundation.	ls generally defective, and flows into the adjacent tanks and hollows.	is much interfered with by hollows and excarations. Some villages are situated on low lands, and the drainage from them is defective.	Flows generally into the adjacent holes and ditches and khals. Some villages are subject to inundations.	Is in some cases effected by khals, but is generally obstructed by holes and excavations. Some valuages are situated on churkland, and are subject to inundations.
98	*	19.	61	<u>ş</u>		
5	1.50	2.67	F	10.2		138
16:21	16.71	11.61	15.14	10.83	11.84	16.68
•	*00 .			900.		888.
17:543	223,761	176,971	78,521	152,322	148,222	112,634
Brahman beria— Town,	Brahmanbaria— Esrol.	Nabimagar – Rurol	Chandina — Rerol	Muradnagar — Bural.	Dautkaudi – Burat	Chandpur—Rural

	densing.	The floors of the bouses are generally naised and pretty dry. In some cases trees abound around the premises. The compounds are dirty. Cowdung is sometimes heaped up within them and sometimes removed to the adjacent fields. Raidely-built privies are used by some, but the great majority of the people resort to jungle, &c., for defrection. The Mahomedan dead are usually for defrection. The Mahomedan dead are usually buried on the banks of old tanks, and occasionally on that of good once too.		The houses are generally crowded together and sur- rounded by trees and jungles which obstruct the free passage of air and light. Their forces are, however, raised and somewhat dry. No conservancy arrange ments, Jungles and other conventioned places are resorted to for purposes of nature. The Mahomedan dead are buried sometimes outside the village and sometimes at other convenient places.	and the premises are in many cases surrounded by and the premises are in many cases surrounded by beteinut, governut, palm and other fruit trees which materially obstruct air and light. The compounds are dirty, but in several intrances an attempt is made are dirty but in several intrances an attempt is made to keep them clean. Dung, &c., is in some duses heaped up in the compounds. The condition of the cow and catile sheds is generally good. Some build maches privies on gous in which the fifth accommistics, while privies on gous in which the fifth accommistes, while other have recourse to fundes, &c., for purposes of other have recourse to fundes, &c., for purposes of nature. Cremation is sometimes carried on even on nature. Cremation is sometimes carried on even on hanks of tanks from which drinking water is taken, while burials usually take place within house compounds.		The sanitary condition of this town is very bad and the conservation strangements inadequate and badiy outried out. The whole town is a vest public lattice. All the hollows, holes, and tanks recking with flith the hollows, holes, and tanks recking with flith the hollows, holes and tanks recking with the town is composed, are enableed in a dense jungle which permits of the commission of nuisance and of the logitude permits of the commission of nuisance and of the logitude permits and under municipal nanegement. They consist generally of mat enclowures over the nullahu, the water of which receives a great deal of the forcal matter. The wealthier classes employ neether, but the night-soil is hurried in the nearest waste land. The minth-soil from the public factions is trenched in the jail garden. The arrangements under the bead of disposal of the dead, markets and slaughter-houses are objectionable.
SANTIARY ESTIMATE OF VILLAGES IN BACE CIRCLE UNDER THE READS OF	Water-supply.	some extent. Is taken from tanks, many of which are in a foul. The state, and also from the river Dakatia.	rs regarding the sanitary condition of the villages in this thannah are not yet available.	Is taken from tanks, many of which are over- grown with vegetation, and from the serge Howrah.	Is taken from tanke, khals, and the river Dakatia The tanks are mostly clean and in a fair state but trees are allowed to grow on their banks		Is taken from tanks and wells, one of the former of which is to be found in every house, and most which is to be found in every house, is also taken from sprüngs, and is said to be unrivalled but the sprüngs are neglected. Five large tank five wells and eleven springs have been reserved for drinking purposes.
SANITAR	Drainsgo.	is fair in some villages, and is to some extent, lecured by means of the exervations on the sides of roads.	Pariculars regarding the sanitary condition of the	is generally to the neighbouring holes and errowations, and is fair only when the rilages are situated on a higher level then the surrounding fields.	Is generally defective. Hany villages are strated on low ground and are full of pits, holes, and ditches, and consequently become water-logged during the rains.		The drainage is naturally good, but it has been much neglected. The drainage of the fown is bad owing to obstructions. Several of the drains are full of silt and jungle. The purces drains in the baza rare choked and in many places are clouded and in many places are clouded and in many places are clouded the constitles along the Chaktar, nullah are getting swamped.
	Bowel-com-	S	ķī	-	i.		7.88
PULATI	Cholera.	07.	**	- SS ::	1.30		3
RATIO OF PRATES ERON- PER 1,000 OF POPULATION.	FOYOR.	89	10.91	11.71	67.73	•	1.48
RATIO PER 1,0	small-pox.		 		91		•
	Population.	86,872	103,218	114,152	172,347		81 isi
	Name of carele.	Lakeham—Burol	Pogonathdighi - Br.	Kasba—Barai	Bazigang – Rural		Chittagong—Town
	District.	*		Tipperah	•		Chithgong

Chittagong - Earsal Kv,023	Suddaram—Town 6,124 8.3 1 19 77 The drainage is very defective. There are for drinking purposes. The vaster of one ishment being instead with one another in many cases carried out by the tidal khale. Surface cleansing is very partially attended to the name per growth into cesspring are throughout the control which have been research of the control which waster starning the drain are futths with when the tidal khale. Surface cleansing is very partially attended to the sweepings are the sevent of the latter is good, that of the others suspicions. The very possible which are as allowed one of the latter is good, that of the others suspicions. The very partially attended to the very partially attended to the very partially attended to the very partially attended to the sweepings are transfered unting the drain are farming the drain are farmed out by the tidal khale. The drainage. Surface cleansing is very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to the very partially attended to very partially attended to very partially attended to very partially attended to very partially attended to very partially attended to very partially attended to very partially attended to very mostly by the drain later is good, that of the others are slowed to the very novel have the very novel have the very mostly by the drain later is good, that of the others are slowed to the very mostly by the drain are such or very mostly by the drain are also used as a later of the very mostly by the drain are also used as a later of the very mostly by the drain later is partially attended to very mostly and the very mostly are a very later of the very mostly are very mostly and the very mostly are very mostly and the very mostly are very mostly attended to very mostly are very mostly atte	Sudharam—Raral. Sudharam—Raral. Sudharam—Raral. Sudharam—Raral. Sudharam—Raral. Southaram and other southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and other convenient places. Southaram and s	Sundeep-Rarel 72,467 16'45 Drainage is defective. The roads or footpaths Is taken from tanks. The sundicient, but The rilages are full of exavations and disches contains stagnant water and vescetation, and the bonase are not believed to protect it from pollution. The rilages are full of exavations and disches contains trees which in the bonase are full of exavations and secretarion, and the bonase are full of exavations and disches contains and disches conta	Fonny—Zarel 18:29 '13 '17 The villages are situated in high ground, and is taken from tanks and khals. The former do not The house flowrs are dry. No consequently drainage from them is generally dry up. No regularly constructed stranges and far up. Sort to the fields for defocation.	Chogalnaya. Rural, 109,278 18-31 1 '60 '84 The same as in thana Fenny described above. Is taken from tanks. Quality and quantity of the Conserrancy absent. Cremation is carried on nestrated.						42.60	\$6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	taken from tanks and thals. The former do not staken from tanks and thals. The former do not staken from tanks and thals. The former do that staken from tanks and the firm with a staken from tanks and the firm with a staken from tanks. The staken from tanks. The staken from tanks and the firm with a staken from tanks. The staken from tanks. The staken from tanks. The staken from tanks. The staken from tanks. The staken from tanks. The staken from tanks and thals. The former do not tanks is taken from tanks. The staken from tanks. The staken from tanks and thals. The former do not from it staken from tanks. The staken from tanks and thals. The former do not from it staken from tanks. Quality and quantity of the bold of wantie bill.
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	•		BATIO PER 1,	BATIO OF DRATES PROK-	THE PROPERTY	10 X .	BATITAB	SANITARY ROTIMATE OF VILLAGES IN BACH CIRCLE UNDER THE HEADS OF-	R THE HELDS OF-
District.	Name of Circle.	Population.	.xoq-llamB	Pevor.	Cholera.	Bowel-com- plaints.	Бталваве.	Water-supply.	Domestic eleansing.
•	Banni-Raral	41,731	i	00.03	형	8	Is defective. Some of the villages are situated on chur land.	Almost the same as in Sudharam Rural described above.	Almost the same as in Sudbaram Bural described above.
	Hatis-Rurul	40,295		*20:17	31.	56	Almost the same as in Sudheram Rural described above.	is taken from tanks which supply sufficient water throughout the year.	The houses are iventilated. There are few trees and no jungle. No conservancy a rangement. The house compounds are fittly and unitdr. No latrines. People resort to the marshes or fields for defencation.
	Begunganj – Råra i	128,933	II.	14.37	ŝ	is	Same as in Sudhars w-Rural-described shore.	Sudharaw-Rural-described Same as in Sudharam-Rural-described abore	Same as in Sudbaram Bural describ Cabore.
Northolly.	Lakhipur—Baral	118,321	10.	17.32	1.55	*	. defective and is generally into the neigh- boaring dobas, govs, diches and natas. The food water of the Megus submerges the fields in some places. Some villages have roads, but without side-drains.	Is taken from tanks, khais and the river Megna. Some of the holes and tanks contain water which look like regetable infusion.	The floors of the houses are generally raised, but are rill rather damp. The premises are in many pictanees surrounded by trees and jungles which obstruct air and light. The habits of the people are often flithy and generally cleanliness is much neglected. There are some rade-y-built privies in which the fith accumulates, till is washed away in some cases by the tiles and curing the rains. The majority of the people resort to fields and other places for purposes of mature. The dead are burnt and burnt and within villages and on basis of khale and crivers, and sometimes on that of tanks from which drinking water is taken.
	Ramganj-Rerol	86,742	ė.	15:45	ę.	5ť	Almost the same as in Lakhipur—Rural—des- cribed above.	Is taken from tanks, dobds and khals, all of which are more or less open to pollution.	n Villages are situated on very low ground, and are full of betelenut and cooping trees and tanks. The dead are burted on the banks of old and unused tanks.
Psins	Patina. Zozon	160,237	99.	23 50+	08.7	80 .01	Is detective. The long promised drain to carry off the drainage from the Chowkges is under construction, the floor of the culvert under the railway at the Patns station has been lowered to the necessary depth, and the work is nearly finished. A complete and efficient drainage scheme is required for this town.	There are 50 multiple and from well. The rate 50 multiple, and several private wells. The former, and most of the latter a well, protected. The private wells are mest witches, and although the water of some of the has been condenced, it is generally believed be wholesome. But this can hardly be the case, as sarface deflement is general, and the wells are situated in proximity to well-privies.	Surface cleansing appears to be fairly carried on, but with strict apperraion over the conservator establishment much can yet be done in this direction. The proofe of disposal of the fluid house and kitchen retuse in bad and objectionable, and will continue to he so till an efficient system of drainage is provided. There are in public latrines which have separate compartments for mades and formele. There are also several portable latrines. About two-thirds of the inchatitants are said to have privies of their own, the conditions of which are somewhat better than they used to be. Tromiscuous deforcation is very great in this town, and will continue to be so until a sufficient number of public latrines is provided. The magit-seal from the public and private private in removed once daily to the transhing ground, and buried in pits measuring \$\epsilon \times \ti

Behar - Zural Behar - Zural Barh - Tour	48,971	90 97 70 94	6 8 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6 9	11:50	176	faver defective. No further particulars given by local officers. Most of the roads in the town are unnertalled, and not provided with side-drains: the water-supply is not good, well water is use and excavations which receive the surface drainage is defective. The high alungs or bunds, which exist in almost every village of the roads in this town, are getted of the paddy-crous, impedent natural drainage to a great extent. The roads in this town, excepting two, are kincha, and not provided with side-drains. The water-supply arrangements are not quitted frainage is defective. Pits and excavations which exist, and receive part of the sarface drainage.	The houses are mostly made of mud walls, and are thatches of with hare tiles, or a layer of straw is put underneath. If they are chaely built on a slightly raised flore, with defective ventilation, and are overcrowded with innates at night, particularly in the houses of the power classes. The houses are awapt daily, together with the angula, or compound, in front of them; but their surroundings are filthy. The fluid refuse passes through the house drains to the footpaths between the rows of houses, where it partly cals into the soil, and partly eraporates. The habits of the people are very filthy. Defectation is promise used to the properly sweept and defectation is carried on on their sides. There are the public latrines, but they are kept unclean, and their floors and walls are not tarred; the private latrines which exist are mostly well-privites; the night soil at treached in deep tremches; the offs. &c., of sanghlered cattle are not properly well-privites; the night soil as public latrine in the nor-place disposed of. There is no appointed burial place or burning glad. Surface cleansing is not properly attended to. The lanes are not sweety pleared; the region of the form. The power classes defecent everywhere: the pirate privies counst mostly of surableses, and energy are attached to must of the houses, and there is no appointed slaughterhouses, and there is no appointed slaughterhouse, and energy place is no burnal place or burning glad.
Barh—Rural Dinapar—Town	170,589	F.	17.90	1:25	2.18	The villages in the northern portion of this Is taken from the river Ganges and from walls, then a resistanced on comparatively high ground. The surrounding of which are so filthy that the ground. The surrounding of which are so filthy that the fair, int the southern portion bing very low, is inundated during the rains. Particulars regarding the sanitary condition of this town are not yet available.	Same as in Behar thana described above.
Dinapore—Bural	15,387		81.71	3 3.9	11:62	The natural drainage flows into the river. Is taken from wells, most of which are pretected Sone, and there is no obstruction. very dirty, as the people wash themselves and themselves and themselves and themselves and themselves them. Then weiter is therefore not above suspicion.	Same as in Behar thana described above.
Nokamuh	85,824	61.	19:55	13.	5.49	The villages in the northern portion of this is obtained from the river Ganges and from wells, I than are situated on comparatively high ground. The natural drainage is consequently fair: but the southern portion being very low, is inundated in the rains.	The habits of the people are menerally fithy. There are nonservancy arrangements; accumulations of flith are to be seen everywhere, and defocation is premiscrous.
Patuha—Kurol	190'89	ä	15-47	9:70	91.3	Same as in Mokamah thana described above Same as in Mokamah thana described above	Same as in Mokamah thana described above.

			RATIO PER 1.	OF DE	RATIO OF DEATHS FROM- PER 1.000 OF POPULATION.	10%.	SANITARY B	SANITARY ESTIMATE OF TILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	THE HEADS OF-
District,	Name ofircle.	Рорадисіоп.	Small-pox.	Fever,	Своюта.	Howel-com- plants.	Рыпа -е.	• Water-supply.	Domestic cleansing,
	Monair—Barat	98.516	35	15.34	1.53	÷	The villares that are situated on high land is have their natural distinate free, but those on low land especially in the morthern nortion of the thana, are inundated in the rains.	is taken from wells both for drinking and other domestic purposes.	There are no convervancy arrangements. The footpaths are kept bery with own-dime, swam, &c. The houses are life-entilated. There are a few private private which are not kept clean. The majority of the respie delicests wherever they like. There are no burial-grounds, and no proper arrangements for cremation.
	Atasarai—Bural	79.93	9 0.	19.61	94.9	ş.			ť
Patna	Salao-Rural	11,477	ő	21.13	17.	1.11		Only well water is used both for drinking and The habits of the people generally are very filthy. of there domestic nurposes. Outlift of water not rancy arrangements do not exist in any rulage.	The habits of the people generally are very fifthy. Conservancy arrangements do not exist in any village. Defin-
	Masouri-Rural	120.613	9	17.36	5.38	1 51	the natural drainage to a great extent. The canal enhankments too are said to interfere with the drainage, which flows	stated by local officers.	cation is carried on anywhere. There are pralmost every thans, which is a great Thisance.
	Bikram-Rural	180,363	ST.	13.51	3:30		into and stagnates in pit _{s a} nd excavations.		•
	Hilsa-Rural	176,075	Ş	17.21	4.31	1.4			3
	Bankipur—Rural	97,001	ŝ	14.76	1.14	1.46	Is fr and flows into the newly.cut irrigation general earal.	frea wells, which are protected and y ccutain good water.	The general plinths of the village floures are raised; they are thatched as well as tiled, but the surroundings are very dirty. There are no conservancy arrangements. People deforate anywhere, as there are no prives. H-aps of cowdung, &c., are to be found all over the place.
•	_								
Gyn.	Gya-Town	76,121	ŝ	14-11	80 1° 30	18.7	The drainage system is very defective, both in construction and pivin. In the old town there are large square underground masony drains, which do not empty themselves naturally and camot be flushed for want of water. They are full of sunking fluid, and do not seem to be frequently attended to. Their effect on the health of the people must therefore be very bad. Il Gra is ever to be leathly, some, reform in the drainage system of the town is required.	taken frem wells and the bed of the river Phalgu. The supply is admittedly insufficient for local requirements and is generally of bad quality. No steps have yet been taken imprave matters in this respect.	General conscrvancy seems to be fairly well attended to, but with strict supervision over the establishment it can be still more satisfactorily done. The cow and extile sheeds are not shways kept in the same in which they should be. There are 19 public latrices in different parts of the town. Nearly two-thirds of the plan of construction of, and the mode of cleaning which continue to be imperfect.
***************************************	Daudnager - Town	9,870	હ્ય	ġ	79.8	18	Is pretty fair. There are some puous drams is along the ordside, but most of the drains are kutchs. The fall of all the orans is towards the entrenchment and the Sone river, and is easy, so that rain-water runs off in all directions. The centre of the town is higher than its outskirts. An outlet for draming the most is required.	taken from wells, of which there are ver many. Nome of them are pucca, and they affor an abundant and wholesome supply, but man others are polunted. The water of the cana which is not much used.	The houses are crowded together; surface clearsing and the cleaning of drains are attended to; but on the whole, the conservancy arrangements are unastisfactory. Sweepings are utilized in filling up ditches. There are no public latrines, and no arrangements have been made for the disposal of night-soil from the private purites, The ditch around the fown is the receptacle of all kinds of filth, rubbish and offensive matter, and is consequently a source of unhealthiness.

i i i i i i i i i i i i i i i i i i i	Is taken from the wells and in a few villages from. The houses are mud-walled, compact, and defective in rivers. The water is nowhere above suspicion. internal ventilation. The house flowrs are dry and clean, but the surroundings are very fifty. The eattle, sheds are within the house compound and are cleaned daily, and the flowrs are sprinkled with ashes every now and them. Deforcation is promise ours.	Is taken from the wells and in a few villages from rivers. The water is nowhere above suspicion.	The natural drainage is free, but it is obstruct. ed to a certain extent here and there by the alangs or bunds.	91.	9.36	18.83	8	78,516	Atri—Rural
ı									
			-	3	502	51.13	孝 ;	96,211	Barachetti-Rural
9 q	reductions reference, the seniesty condition to these places are not at present stainsoined as the officers of the "sectination Department, from whom the information is obtained, have not get visited them, as recentation has not get been introduced into them.	d them, as vaccination has not yet been introduc	information is obtained, have not yet visite	ដូ	13:39	29.95	.17	162,319	Saharghati-Rural
		to these places are to the transfer and the	Dowtinnland messed ing the coniterr condition	10.	3 5	25.47	용	96,775	Rajali—Rural
				Ļ	70.38	85.61	9	94,046	Nabinugger-Rural
ı	•			89.	10.9	25.11	3	215,393	Gya - Eurol
l AMERAGE	Is taken from wells and in a few villages from The houses are crowded together and defective in inter- the river Poon-Poon. The water is polluted in restricted in the power classes is general. Cattle shade are within the house compount. The house figures and and are ken telem, but he surroundings of the followers of the followe	Is taken from wells and in a few villages from the river Poon-Poon. The water is polluted everywhere.	The natural drainage is free, but the canal embankment impedes it to a certain extent.	19.	% 90.80	16.03	ż	110,435	Arwal—Rurai
8885485846 [The dwelling-houses are compact, mud-walled, and defective in internal rentilation. The mud floors are dry and kept clean together with the anguas or house compounds, but the surroundings are very fifthy. Promiscious deferation is common. There are sundays so well-privies. The fluid refuse partly noaks into the soil and partly eraporates. Dead bodies are remarked on the banks of the nearest rivulets, on the sides of the hells, or on any waste lands close to the villages. The Mahamedans, bury their dead on the outskirts of the villages.	Is taken from rivers and wells. The latter are not properly protected from inward dranage and the people bath and wash near them.	The drainage is naturally free, but it is obstructed here and there by alungs or bunds.	â.	3.16	2519	6.		Packri and, Nowada — Eural,
4.4.5.4.8	Cleanliness is not known, or, if known, is not practised. The only latrines that exist are well-prives which are objecticnable. People deferente wherever it is convenient for them to do so. Sweinings are deposited in heaps here and there, and the used as manure, when required.	Is chieffy from wells which are not protected from inward drainare, and in which promiserous cipping of water-pots is allowed. As the surroundings of the wells are also not clean, the water is not above suspicion.	The villages in the northern portion of this Is than the rillages in the southern portion, which are of studie on high ground. The direction of rithe drainage is froe, south to north, and the hill-streams and rivers which pass through the thans carry away the water, &c., from the draina.	3 1	6.81	14.63	\$	176,805	Titari—Bural
Felisen i	Conservancy arrangements are imperfect. Night-soil is not properly trenched, but a pa-ce of land has been taken up for the purpose. The public latringes are quite inadequate in number. There are sundasses or well priries. The prople defectate wherever it is most convenient for them to do so.	chiefly taken from wells. The promiscuous ipping of water-pots pollutes the water to a reat extent.	Is detective. The roads are not sufficiently wide and type are no provided with properly constructed side drains. The pit-and acravations and a deep ditch receive the surface drainage.	 	11,82	17,83	.	176,805	Titari— Zows
p eq e	No conservancy arrangement in any village. Refuse and villages are deposited here and there within the villages and are used as manure when required. The people are very filthy in their habits.	The natural drainage is free, but the canal Istaken from the river Poon and from wells, embankment impedes it to a certain extent. The water is polluted everywhere.	The natural drainage is free, but the canal embankment impedes it to a certain extent.	1.39	09	18.64	1.8	92,296	Daudnagar — Rwrai

Fig. 12. The control of the country					RATIO PER 1.0	OF DEAT	RATIO OF DEATHS FROM- PER 1.000 OF POPULATION.	Ţķ.	SAXII	SANITARI ESIIMAIZ OF VIILAGES IN EACH CIRCLE UNDER IHE HEADS OF—	BR 1HK UEADS OF—
Armb-Erral 291,334 '03 1959 673 '22 The natural divisions is from origing to the World and School and Marmb-Tourn 40,468 '70 '717 673 '22 Dimining is defective, all the driving and division of the control of the school of	District	t the state of the		Population.	-xoq-llam8	Fevor.			. Drainage.	Water-supply.	Demestic cleansing
Arrah-Tours \$5,465 To 777 678 E 53 Dainnee is defective. All the drains are level friend provided by the name of which are his school of which are his school of the control of the co		:		457,47		14.63	6.81		is free owing to the on raised ground.		The houses are mud walled with tiled and thatched roofs. They are closely built and arranged in rows, leaving a small space between them which serves the purposes of rade and drains. Their internal ventipution is defective. Cattle sheds are chose to dwelling the sheds are chose to dwelling the compound. Cowdenter is used for fuel. No conservancy arrangementa exist Defectation is promiscuous. There are no public privies.
Arrah—Rurai 251,487 25 1873 468 4. Derhage is defective. The roads serve the The river Banas supplies the drinking water. During the raise from patrose veil it is start, and for this purpose veil the same place from pollution, are also sessenan—Town 21,516 22 55 3.59 Dminage is defective. The roadside drains do is taken from wells, which are polluted in various of water. Sassenan—Town 21,516 32 37 17:56 22 55 3.59 Dminage is defective. The roadside drains do is taken from wells, which are polluted in various of water. Sassenan—Town 21,516 72 22 55 3.59 Dminage is defective. The roadside drains do is taken from wells, which are polluted in various of water. Sassenan—Town 21,516 72 22 55 3.59 Dminage is defective. The roadside drains do is taken from wells, which are polluted in various of water. The interface of the roads water is bad, and is much obstructed by the cannal provided with paragets, but their surrounding embands of the cannal see lithly. The latter from upprotected.		Arrab - Town		48,465	SS.		18.9		brainage is defective. All the drains are kutcha and deficion in level. But a sobone of surface drains has been pre-sers I with its proposed to lave several oral bottomed in poucea, channels to convey canal water throughout the town, which will not only give a general flush, but afford water for watering the reads.	rchiefly taken from wells, some of which are it very crowded healities with masoury in design at an end mouth su sensing at a few bears and mouth su rendings. From few does the spill water gwell away. The Municipality intends to make on two of the wells really reliable as a sound on a transport. The water at present is portion of in various ways.	All the streets and lanes are cleaned both morning and evening, and the sweepings, &c., are proparty disposed of. The condition of the cow and other cattle chacks is unobjectionsble. There are sit intrines for males and nue for females. The inpit-leading from these executable privide privites as can be cleaned is removes and buried in shallow trenches in the trenching ground. The arrangements under the head. Disposal of the dead." are unobjectionable.
21,818 '22 17:56 22:55 3:89 Drainage is defective. The readside drains do Is taken from wells, which are polluted in various chocked up in places, clastructing the free flow of water. 133,942 '07 23:30 11:49 '44 Drainage is defective. The natural drainage Is taken from wells and tanks. The former as is had, and is much obstructed by the canal are filthy. The latter are unprotected.	Shahabad			281,487	- F	18:33	4.63	*		The river Banas supplies the drinking water, but bathing is carried on in the sam place from which it is trawn, and for this purpose wells, kuti-ta and not protected from pollution, are also resorted to.	The bouces are crowded together, preventing perflation of alr, and the crowding of immates within the bouses at one surface cleanang. The liquid refuse soaks mito the ground or finds its way to the roads, and solid refuse is thrown here and there. There are no public latrices, and the private ones consist of sundasses or well-priving, but the people in general deficents wherever its most constitute to them to do so. The find retuse from the events to them to do so. The find retuse from the events which are close to houses again to the ground shells which are close to houses again into the ground or finds its way to the roads, and the solid portains thrown on the roads or drived for fuel. There are piles and bollows containing decomposing vegetation, Surface cleansing is properly attended to.
133,942 '07 23'30 11'49 '44 Drainage is defective. The natural drainage Is taken from wells and tanks. The former at is bad, and is much obstructed by the canal provided with parapets, but their surrounding embankment on the north.	•	Sasetum-Tu		21,918	홿	17:53	:23 :점	88	defective. heir intend in places, v	Is taken from wells, which are polluted in varior ways.	The houses are mostly purca and some are tiled, but they are very closely hulli, and in some places the rays of the sun never reach them at all during the day. They have no proper means of ventilation. There are public moveable hetrines made of wood frames, but they are not regularly tarred. The burning of Hindu dead is heing carried on in very close proximity to the town and public buildings. The Mahomedans bury their dead in the compounds of their houses or near public roads.
		Sasseram	-	133,948	40.	23.30	11.40	.#	Drainage is defective. The natural drainage is bad, and is much obstructed by the canal embankment on the north.	The former at surcounding sected.	The soil is porouse and abverbe moisture. Some of the villages are situated on high ground. The people are very filthy in their habita. The house-flows and compounds are very filthy. Sweepings are collected in heaps the wanted for manning the popy-fledded. Cowfung the used as finely but during the rainy season the porter accumulate it here and there. Deficients in promiserions. Tanning of hizer is carried on within some villages.

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	The houses are crowded together and defective in ventilities. Some of the roads have been retailed, others are kutchs, but they are not cleaned, and are encroached upon n. at the basar. Surface densing is attented to the sweepines and rathes emberged in filling up hollows and ditches. There are public latrius for moles and females, but they are not generally used. Defection is promisteness. There are well-privies in several houses. The night-soil from public and private latriues is trenched.	The houses are crowded together and defective in venti- lation. Refuse and swage are secundated here and there, and house sweepings are thrown on the reads. Fromiscuous defecation is common, the children generally resorting to the roads.	Surface cleaning does not appear to be attended to There are four public latrines. The private privages under municipal management. There are no well-prives. Night-soil is either buried or deposited in places appointed for the purpose. Cesspite exist outside of most houses. The Hindu dead are either cremated or thrown into the river.	The houses are crowded together and ill-rentifated. No conservancy arrangements exist. Servines or privise exist. Defeccation is promiscuous. Sweepings and retuse are accumulated in front of the houses.	There are no public latrines. Defencation is promisenous. There is no municipal staughter-house, nor any appaint. ed burial-ground or burnaug ghât.	The habits of the people are fifthy. The houses are ill ventilated, but their flows are acriminated for attemption, but the sweepings are accumulated for manure Defocation is promiscuous.	The dwelling-houses are constructed of mud walls with tiled or thatched roofs, with defective ventilation, and are overcrowded with inmakes at might particularly the houses of the poorer classes. The floors of the roundings are fifthy. The fluid refuse passes through both sears of the classes through both where it partly soaks into the fool and partly but where it partly soaks into the fool and partly but they are cleaned daily. Defocation is promisecous,
Is taken from wells. The wells are for the mo part situated on raised remund, and their ma gais provided with parapets; but the parapet are, with few exceptions, nowhere well-cemente or plastered, and bathing and washing are pefirmed near them; hence their water is usubove suspicion.	Well water is chieff used. The public wells are surrounded with masonry parapets and platforms, so that inward drainage is o'wisted. Canal water is used for culinary purposes.	Is obtained from wells which are situated on high ground, but most of them are kutchs, and do not generally contain good drinkable water.	Is taken from wells and the river Ganges. The river waster is good, tuts during the rains silt is washed into it. The water of most of the wells is brackish.	Is chiefly taken from wells. Some of them are purca and some funcha, and their water is not free from pollution.	Is taken from tanks and wells. No tanks have been set apart for drinking purposes. On the whole, waser-supply is bad,	Is taken from the river Ganges and wells	There is a network of Is taken from wells and from the river Sone. The saiks of which impede water from the river is not pure, as partially burnt dead bodies are cast into it. The wells are for the most part sitemated on raised ground, and their markins are provided with parapets, but the parapets are, with few exceptions, now heav well enemthed or plastered, and tathing and washing are performed near them; hence their water is not above suspicion.
Drainage is defective and is further impeded by the emban, ments of irrigation canals. The pits and exeavations which exist in the pits and exeavations which exist in the large grounding the surface drainage; and being underlied, the water cuber scaks into the soil or eraporates.	The drainage, is defective. The roads are provided with side-drains, except in the bazar, where there are kutchas drains which are not where there are known of the drains remain filled with can water, causing dampness in their locality.	The embankments which exist impede the natural drainage. The northern portion of this thannah, however, is situated on the banks of the rivers Ganges and Sone, and drainage in that part is pretty free.	The drainage is defective. Pits and excava- tions receive the surface drainage which starrates in them; the few drains that exist are deep and dangerous.	Drainage is defective. The footpaths serve the purposes of drains, and deep excevations exist which contain stagmant water all the year round.	The drainage is defective, there being hardly any drains at all.	Drainage is defective. The footpaths serve the purposes of drains. The rain-water flows into deep excavations, where it stag- nates	Drainage is defective. There is a network of irrigation canals, the banks of which impede the drainage.
49.	in co és	9	8.8	.	19.5	ë	*
10.22	16.54	7.84	23.	2. 2. 9.	18*	4.26	*
49.52	7.21	98.98	Z.		16.23	24.61	77.71
	59		83		.11		Ş
104,647	17,835	242,103	17,688	145,587	5,728	166,095	78,884
Karzher or Nokha— Karof.	Риштоп— <i>Точо</i> я	Dumraon – Raral	Burnt Town	Burar and Chowes.	Bhabuah Town	Shabush, Durgersti, and Chand-Baral.	Dehri-Baral

		:	BATIO PER 1,	ON OF DE	BATIO OF DEATH FROM PER I, 640 OF POPULATION.	0M - 10M.	SANITABE	SANITABY ESTIMATE OF VILLAGES IN BACH CIRCLE UNDER THE HEADS	B THE REIDS OF-
District	Name of Civile.	Population.	Small-pox.	Fover.	Сровети.	Mowel-com- plants.	Втыпаде.	Water-supply.	Domestic cleansing.
	Dhungain— <i>Rural</i>	179,916	10.	17.06	61	10	Drainage is defective, owing to the embank. ments of the network of irrigation canals which impede the drainage.	Well water is used both for drinking and other domestic purposes. The wells are for the most part studied on raised ground, and their margins provided with parapets, but they are not well cenented of instered, and bathing and washing are performed near them; hence their water's not above suspicion.	Same as in Dehri thannah described above.
Shehabad Shehabad	Jegdispur—Tomp	12,568	20.	11.87	2.14	1.61	The roads in this town, excepting one, are unmetabled, and not provided with side-drains; the draining is defective, the draining on the sides of the metalled road are deep and full of fluid refuse.	The water-supply is not above suspicion. the source from wnich it is taken has not been stated.	The conservancy arrangements are quite unsatisfactory. There is not a single public latrine; defocation is permitted anywhere and everywhere; the arrangements connected with the disposal of the dead are very unsatisfactory. There are no burning ghat or burial ground.
	Belouti-Raral	183,311	\$ *	17.04	80.4	ţ	Prainage is very defective. The surface water that's no exit, and there are deep excavations full of foul water.	Wells supply water for all purposes. They are mostly kutchs, and as bathink and washing of clothes, &c., are carried on near them, they are very foul.	The houses are crowded together and defective in ventilation. Overcrowding of inmates in them at night is general. The house surroundings are very filthy. No conservancy arrangements exist, Defocation is promiscuous, Refuse is collected in heaps.
	Mohania or Bamghur-Rural,	150,413	50.	16.93	19.9	\$	Same as in Dhungain rural described above	Same as in Dhungain rurs! described above	Same as in Dehri rural described above.
•	-	-					•	•	
	Notatierpur—Tour	49,748	F		1.81	S.	The drainage is as defective as it can be. If There is no regular ay tem of drains, sud the imperfect ones now existing are not kept imperfect ones. They are largely defructed by rubbish cast into them by house-holders perhaps, but more frequently by municipal servants. A proper scheme of drainage is urgently required.	staken from private wells and tanks, none of which have been set anset for drinking the former is generally resorted to for the parpose, and the latter for bathing, washing clothes, &c. Many of the tanks are said to be more condition, but this seems to be unlikely as they often receive house drainage, and an in many instances situated close to latrine middens, &c. The wells, though nunerous, are badly looked after, and do not therefore contain good drinkable water,	Surface road cleansing is fairly well done, but the sur- remaining so the bouses are generally dithy. Fluid bouse and kitchen refuse is improsedly disposed of. The cow and cattle sheds are in a filthy state. There are 10 public latrines, which are prefected and very dirty. The private privies are mostly in a filthy and coffensive state. The night-soil of the fown as not remagned from private bouses. The nights soil from public latrines is tremeded, but the system followed is objectionable. The arrangements under the heads disposal of the dead, markets, and stauthter-houses require more attention than is at present paid to them.
	Hajipur— <i>Tou</i> n	25,696	\$3	4.78	101	5:33	Drainege is pretty free: the streets having been provided with side-drains, puces and kutchs.	Is taken from the river Gauges, wells and tanks. The quality of the water is believed to be particularly good.	Surface cleansing is attended to; private house seavenging is not quite satisfactory. There is one double-seated novembelo latinise in man move are much required. Well-privise exist in private houses. There is no trenching ground for matti-oil, which is buried in ditches at some distance from the habitations. There are 105 burial p aces within the town.

Laignai			3	15.50	3	770	IMOTHERADE IN THE HOLD DOCK HITTINGS IS LEAD HOUSELY HIVE WEIGH.	om wells. Kiver water is also The street sweepings and garbace are removed. are three public latrines. The roads are kutcha.	oved. There
Mozoff	Laiganj—Toses	16,783	*	4.7	79.8	15.9	Drainage is said to be satisfactory. The town is intersected by numerous water channels, sand embanked by several tanks. Grant of the drains of the drains discharge into several tanks.	nerous wells, Quality of the This town is composed of a closely-packed baza' with outlying villages to the north and south. Many of the houses are substantially built. Surface cleansing is looked after, the refines and garbage being removed to a distance from the town and buried. Sweepings, are utilized in filling up hollows and ditches. There are no public latrines.	I bazar with Many of the cleansing is removed to weepings are ches. There
	Mozutterpur – Rural	500,596	10.	5:57	£7.	ş			
Sitama Sitama Boaufferpur	Sitamarhi, Belsund and Belamochpa- kumia – Rural,	463,137	35	7.25	30.4	7			
*******	Paron and Budraj- Rural.	289,957	8	864-	\$3. 2	1.30			
Lalgan	Lalganj- Baral	127,079	60.	10.29	170	, E	Particulars regarding the sanitary condition of the villages in the	are regarding the sonitory condition of the villages in the Monflerpur district are not at present available, as the officers of the Vaccination	Vaccination
Марма	Mahwa—Rurol	\$10,444	8.	8.70	1.08	22.	Average of the contract of the	Or jet visited them, vertibation not having jet dood introduced mad them.	,
Hajipu nar—J	Hajipur and Mah- nar-Eural.	244,630	600.	8.26	5.19	. \$	•		
Propree Rural.	. (Jeley)-	915,222	Ģ	2.51	14.9	40.			
Shewh	Shewhar—Rural	146,116		1.94	20.5	ş		••	
Durbhungs	Диг b hunga — Токт	96, 99	113	11.99	මා ග න	18.4	The drainage is extremely defective. The listaken from the rive drains are defective in level and non-effective. Eleven tanks have which the drainage finds its way. During the rains the whole I wan is water-logged, and drainage scheme has been prepared, and will probably soon be carried out in a satis. The drainage are fairly prowing the rains are in a fairly probably soon be carried out in a satis. Group manner.	Eleven tanks have been set apart for drinking. Eleven tanks have been set apart for drinking. They are larily protected from politicin, and are strated in central positions. Most of the sate in a foul state. The condition of the wells that are used solely for drinking in the private are seened solely for drinking in the private proparatively better now than formerly. Fucces as as as a freat nuisance, as they are not of some of them, and the ground around some of there in shallow trenches.	een', and the seed in filling in. The fluid fluid blic latrine. Use fluid fluid blic latrine. It fluid see not public and illing ground
Durbh Taight Taight Taight Taigh Thoigh Phoilp Madhu Rosera- Rahera	Durbhungs—Rural Dalsingseni—Rural Talpur—Rural Naschasti—Eural Khajow li—Rural Phohjunus—Rural Mallubani—Eural Rasers—Rural Rasers—Rural Ballers—Eural Ballers—Rural	537, 423 279, 543 306, 433 169,946 151, 540 271, 451 271, 72 856,605 300, 875 273, 742	10.00 10.00	6.42 13:32 14:18 21:63 10:23 10:41 6:14 13:18	8338 7257 7478 7478 7478 759 759 869	25.25.25.25.25.25.25.25.25.25.25.25.25.2	Particulars regarding the sanitary condition of the villages in the D whose duty it is to furnish the information, have not yet visited	Particulars regarding the sanitary condition of the villages in the Durbhungs districtare not yet stailable, as the officers of the Vaccination Department, whose duty it is to furnish the information, have not yet visited them, vaccination not having yet been introduced into them.	Department,

			RAT	to or Di 1,000 or	RATIO OF DEATHS PROM-	0.X.— 10.Y.	SASITAL	SASITABY ESTIMATE OF VILLAGES IN BACH CIRCLE UNDER THE HEAD OF	R THE HEAD OF-
District.	Name of Circle.	Population.	Small-pox.	Pever.	Cholera.	Bowel-com-	Drainage.	Water-supply,	Domestic cleansing.
	Chapra-Zoma	25 · · · · · · · · · · · · · · · · · · ·	e:	5.7	1.67	1.39	The drainage is extremely defective. In fact It is town is considered the most badly drained one in Bengal. It is so low-fring that proper drainageals difficult, but a scheme of -providing the town with saucer drains has been undertaken. The existing are rendered non-effective by being blocked and built over, the consequence being that stagmant water is collected in pools all over the town to the detriment of health.	taken from wells and the river, and from three of the largest tanks which are guarded from pollution. The well water is said to be grood and plentiful; but it cannot be good, as the urrequadings of many of the wells are often lilth, and the encircling drains blocked and tall of mud.	General conservancy is fairly well performed, and sweepings, &c., are properly disposed of. There are 39 public latrines. They are fairly well kept, but more of them are required for the form. There are many private latrines, but they are for the most part unclean. Promiseuous deferention is common. The night-soil from the public and private latrines is trenched, but that from one of the latrines is stored in a shed mixed with dry earth for sale as manure.
Sarun	Sown - Tour	18,807	1.42	1 28	88.8	4.50	Drainage does not appear to be good. There are three main trains, the outfall of which is into the river Dalia. They are k-rit clean by coolies.	is taken from wells, the water of which is admit- ted to be good.	Surface cleansing is looked after, and the sweepings, &c., utilised in filling up ditches. There is one ordinary public latrine and 21 moreable ones. The night-sail from the public and private latrines adviced in the municipal depóte, and thence carted away. To a plot of land situated at a distance from the fown and there trenched. The private privies are not always in a clean condition.
	Rovilganj—Town	12,493		14:32	\$	io io	The drainage is defective. There are puccal and kutcha drains. They lead to the Gogra errers and into the Jingna nulla. They are eleaned now and again by extra coolies.	Is taken from wells, of which six belong to the inuncitative. The well water is said to be excellent and sufficient.	Surface cleansing is looked after. The street sweepings and retuse are thrown out of fown into ditches. There are no public latines. The night-eoil from the private privice is placed in depote established by the municipality, and thence cartled to and thrown on waste land at a distance from the inhabited parts of the town.
•	Chupra—Barai Sewan Gopalgani; Manghi; Manghi; Burakaon; Parsa Masrakh Masrakh Masrakh	190,285 309,081 149,723 149,723 120,281 120,281 120,281 120,918 230,618 230,618 230,618 230,618	22 22 20 20 20 20 20 20 20 20 20 20 20 2	8.98 7.59 9.65 9.65 9.63 8.78 7.93 14.99	24.24.29.39.34.39.39.39.39.39.39.39.39.39.39.39.39.39.	25.25.25.25.25.25.25.25.25.25.25.25.25.2	Particulars regarding the sanitary condition of duty it is to furmsh the information, have	the villages in the Sarur. district are not yet availa not visited the villages, vaccination not having yet t	Particulars resarding the sanitary condition of the villages in the Saru: district are not yet available, as the officers of the Vaccination Department, whose duty it is to furnish the information, have not visited the villages, vaccination not having yet been introduced into them.
	_	-	-	_			,		
Chumparun	Bettinh-Tours	21,263	8.18	16-69	18.9	19.	The drainage appears to be fair. Most of the main streets have been provided with purca drains, which work efficiently. No drainage softene has yet been undertaken, but the Mahanish has expressed his willingness to lend his Engineer for the purpose.	Is taken from wells and tanks. The water of the Si former is used for drinking and that of the latter for bathies. A new tank has been dug ener in railways tation. It will greatly into prove the water-supply of the neighbourbood. The wells are now fairly well protected. Siscory rims as well as pucca drains to carry off the spill water have been privided to several of them.	Burface cleansing does not seem to be properly attended to concept in the streets. There is only one public listrine, and it is very little used. Defecation is no promiseuous. There are 1,100 private privies. They are kept in far order, and the night-soil from them is buried in three treaching grounds outside the right shallow treaches. The arrangements under the heads of parkets and slaughter-house and disposal of the dead are satisfactory.

Chumparun	Motihari – Tosos	10,307	8.	£	\$ 1	\$	Drainage is very defective. Some of the la taken from drains are encroached upon, and the flow of trank, not yet of water impeded in front of honses and shops. An efficient system of drainage is urgently improve the required. Regulated to the part of the private of the priv	is taken from tanks, wells, and a lake. A new tenk, not yet complete, has been due near Henry Bazar by Baba Mooniram Chowdhery. If properly looked after and protected, it will greatly immove the water-supply of the loowlity. The lake is used for bathing and washing purposes; seldom for drinking. There are eight municipal and judy purvate wells set apart for drinking water. Many of them dry up in hot season, and several of the private ones are imperfectly protected.	Surface cleaning is not properly done on account of indequate catablishment. The surroundings of several houses are still very dirty. There are two public latrines; one for each sex, which have lately beconstructed. The condition of the private private generally is bad, and it will be so mail their management is taken over by the Municipality. Defecation is promiscuous. The conservance arrangements obtaining here are very defective. The arrangements obtain the head of disposal of the dead are satisfactory.
	Bettiah—Baral Mothari and 86- gowile—Baral Gobindganj—Baral Baraha and Mudhu- buni—Baral Dhakka—Baral Kesuriah Adapur Loweya	349,972 166,411 167,062 140,000 253,993 177,682 139,996 191,917 105,086	3 84 848	13.39 16.26 10.61 10.61 14.34 14.34 14.34 14.34 18.91	7.03 7.94 10.91 9.14 9.14 9.18 18.73 18.73	80. 11. 18. 60. 80. 80. 80. 80. 80. 80. 80. 80. 80. 8	Particulars regarding the sanitary condition of the villa duced into a great port of it, the plan of operation consequently visited by the officers of the Vaccination	ages in the Chumparun district are not y ons followed in the Behar Circle this year on Department.	Particulars recarding the sanitary condition of the villages in the Chumparun district are not yet available, as, although vaccination has been intro- duced noto a great port of it, the plan of operations followed in the Behar Circle this year did not embrace Chumparun, and the villages were not consequently visited by the officers of the Vaccination Department.
	Monghyr—Town	67,620	0ž.	11.07	ea 21.5	28.9	The drainage is defective. A drainage scheme is however, in hand, and a surveyor is now There as employed in making a survey. After its completion and the approval by professional Engless of the scheme drawn up. the Commissioners of the Municipality will take the master in hand and carry it out year by year.	Is taken from wells and from the river Ganges, if There are nine wells beinging to the Municipality and 165 to private parties, which are said to be used solely for drinking purposes.	Surface cleausing appears to be fairly well attended to. There are 19 public latrines for makes and 29 for females. There are said to be sufficient for local requirements, and are kept in groud order. The mode of disposal of night-soil continues to be satisfactory. It is removed in higher the places at the request of ryots, land in tellerent places at the request of ryots, land their manner at the rate of ks, 40 a bight.
Manghyr	M. ngbyr—Zarai	81,736	\$2	13.93 14.03 15.03	ន	<u> </u>	The drainage is defective. The pathways are The source not provided with side-drains. which an	The sources of water-supply are wells, many of which are protected by pucka parapets.	The people are indifferent to personal cleanliness. The houses are crowded together. They are ill-rentilated and in a bad state of repair. Pits and afterwariness abound an everal villages. The people resert for £: fecestion on the sides of reads, excavations, and waste lands. Retuse matters and cowdung are scenamished in front of houses and on pathways, and are removed only when required for manure. There is no conservancy. Dead bodies of the Hindus are cremated on the basis of rivers or tanks. The Mahomedans hury their dead outside of the villages.
<i>l</i> . 2	Samalpur—Tousa	13,563	46.	16.73	94.	20.00	The drainage is defective. Several of the drains are blocked, built over, and out of in the hills near trepair, and are consequently non-effective, and are to barrows as it catches as the falls, so that the the barrows either a ance it is clear an rallway station and	The bunding up of a valley he town has been carried out, tume of water confused. The ramed by almost barren stony water is little liable to confused. In an unital or verseable. In appear, if you works by a pipe,	Surface cleaning seems to be fairly well attended to, and the sevepting, de., are properly disposed of. There are ten public latrines. The private private private proces, but are situated too close to the house weish. If the night-soil from both-the public and private latrines is removed daily and trenched. The arrangements under the bead of "disposal of the dead" are unobjectionable, with the erception that Hindu and Mahomedan paupers, dying from small-pox and cholers are thrown into the laken nulls.
	Jamalpur-Rural	6,261		12.12	_	rer P	Particulars regarding this rural area are not available.		

	•		RATE PER	RATIO OF DEATHS PROM- PER 1,600 OF POPULATION.	ATHS PR OPULAT	ow-	Saritar	SARITARY ESTIMATE OF VILLAGES IN BACH CIRCLE UNDER THE HEADS OP-	R THE READS OF-
	Name of Circle.	.noilulnqo4	smæll-por.	Fever.	Oholera.	Bowel-com-	Drainago.	Water-supply.	Domestic cleansing.
	Shaikpurs Town	12,517		22.26	10.24	es es	There are no drains. No further information furnished.	Is taken from springs and wells. The former drain from the adjacent bills, and bring, down human excrets and other descriptions of fith. The latter are for the most part knicha and unprotected, and their water is fithy and insufficient.	No conservancy arrangements exist. The houses are overcrowded and very fitthy, and refuse and sewage are not removed, but accumulated in the backgards of houses. There are well privies in many houses, but they are never cleaned.
•	Shaikpure, including Luckhisseral—Karai,	136,963	10.	24. Sn	7.16	5 9	No proper drainage. The pathways are not provided with side-trains.	Is from wells, many of which, although protected by pucca parapets, are said to contain had water.	The people are very dirty in their habits. In some places the houses are crowded together, and are without places the houses are crowded together, and are without mithy on the sides of roads, secturidate, and wrisin lands near the dwelling-houses. No conservancy arrange, ments exist. Refuse and cowdung are heaped up in frint of homes and on pathways, and are only removed when required for manuring. The Hindu dead are cremated on the banks of rivers or tanks. The Maho medan bury their dead outside of the villages.
	Sarskurrah, including Buriarpore— Rural	166,253	80.	30.08	co C	77	There is no proper drainage in any of the willages. The valuee paths become impassable during the rainy season.	Well sake as osed for drinking purposes. Where there are tanks and rivers, their water is used.	The people are generally dirty in their habita, and pay no regard to domestic cleansing. The houses are exorded tygether, ill-sentil-ted, and in a bad whate of repair. The floors of the houses are raised and free from campiers. The inits of the poor do not appear to have sufficent accommodation for the innates. House retuse and cowdums, which are accommated in heaps in the front and at the back of houses, are only removed when required for manure.
	Gogri-Raral	365,954	\$	82.13	07.9	T.			
	Kharakpu-Raral	143,079	इ	82.52	80.8	\$	-		
	Pegra-Rural	24.8,632	ş	45.78	00.\$	ę,		٠	
	Beguserai-Rural	\$19,794	*	18:34	1.73	Ŗ	Same as in Surajgurrah thana described above.	٠	•
	Sekundra-Ruraf	122,389		\$2.12	69.2	· 5			
•	Jamui-Burol	120,563	9 6.	23.52	1.2	9			
	Chakye-Rural	109.240	603.	16.13	1.35	9.			

	Jamaj Toros			Data no	Data not available	di	The drainage is defective. The drains are not regularly cleaned, and for want of free flow they become full of foul water which overflows the main road during rainy season.	Wells supply water for all purposes. They are surrounded with pucca parapets. There are a.so five tanks, but their water are not used for drinking purposes.	The houses are constructed on high floors sufficiently preserved from ground damp, but they are ill-ventilated. The people are very dirty in their habits. Surfacedaming is not properly attended to. There are two public latrines, but the people prefer resorting to fields and road sides than to them.
	Bhagalpur-Town	67,453	61.	241	19.2	4.73	The natural drainage is good except in the low-lying parts of the fown. The drains are kept in a cool order, but they are too deep and get obstructed occussionally. Almost all the house urains empty into vats within the premises, the contents of which are removed by the municipal mehters.	Is taken at present from the river Ganges and from wells. Since the opening of the Waterwests in March 1887, some of the inhabitants use filtered water. This will not, however, as yet aff. rd water to the whole town.	Surface cleansing is fairly well attended to, but the streets and lanes are sweet only once a week. There sare 105 public fairness, but they are not kept in ano order. About half the imabitants are said to have privies of their owns, which are variously constructed according to the means of their owners. They are cleased by municipal melters and kept fairly incleased by municipal melters and kept fairly incleased. The night-soil from both the public and private private is daily removed and trenched.
•	Kotwali or Blagal- pur-Rural	- 100,579	5	86.19	\$	84.	The drainage is defective. The pathways are not provided with sude-drains.	is from wells, many of which are protected by pucca parapets. The river Ganges and rivulets are also resorted to for water,	The people are indifferent to personal cleanlines. The honses are constructed of mud-walls with thatched roofs, and are crowded treether and ill-ventifiated. No conservancy arrangements exist. The people recort for defences roun to their borses. Betwee and covadung are collected in heaps in front of houses and covadung are collected in heaps in front of houses and on wathways, and are removed when required for manuring fields.
Bhagalpur	Colgong—Town	6,672		4:4	1 9.8	2. 2. 2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	This being situated on elevated ground, the natural drainage is pretty free, and flows for the most part into the river Ganges.	Is taken from the river Ganges and also from wells.	The dwelling houses with a few exceptions are all thatched and ill-rentilated. There are two public latines, one of which is reserved for the upper classes, and is kept of the be be only is allowed to remain in a very direct to the people is allowed to remain in a very direct condition. Surface cleansing is attended to. Cremation is carried on on the banks of the river Gauges, and the burial-ground is out of the town.
	Colgong—Eseral	186,565	- 50	26.62	1 23	蠡	Same as in Bhagulpur rural described above.	Same as in Bhagulpur rural described above.	Same as in Bhagalpur rural described above.
	Banka - Bural	. 134,227	5	85.53	829	1.49	149 Drainage is defective. Rain water collects in holes and excavations, and causes dampness.	Is taken from wells, tanks, and the river Ganzes. When the river is dry, clear water is obtained by duging into its bed. The sides of some tanks have been raised to prevent surface drainage, but their water is polluted by bathing.	The houses are crowded together and their surroundings are filthy. Refuse and cowdunk are accumulated near houses. The dead are thrown into streams.
	Nudehpara—Bural	262,678	90	37. 08	1.27	\$	Drainage is defective. The pathways not being provided with side drains become impassable during the rains.	Is obtained chiefly from wells. The wells are unprotected and contain unwholesoms water.	Same as in Bbagulpur rural.
. k 4	Kishenganj-Rural	135,329		26.18	왕 	\$	•		
	Sultanganj—Bural	98,427		21.13	01.3	1.98	Same as in Mudehpura rural, described above.	in Mudehpura rural, described Same as in Mudehpura rural, described above.	Same as in Bhagulpore rural, described above.
•	Bibpur-Reral			30.18	22	1.10			

•			RATIO PSR 1,	RATIO OF DEATHS PROM-	THE PE	0 K -	SAXITAR 1	SANITARY ESTIMATE OF VILLAGES IN RACE CINCLE UNDER THE HEADS OF-	R THE HEADS OF-
District.	Nume of Circle.	Population.	Small-por.	Fever.	Oholera.	Bowel-com- plaints.	Drainage.	Water-snpply,	Domestic cleansing,
المستقد الم	Scopole-Bural	250,042	\$00.	18.82	\$1.5	\$	Drainage is so defective that the village roads in become impassable during the rainy season,	Is taken from wells and tanks, which are also used for lathing and washing purposes.	. '08 Drainage is so defective that the village roads is taken from wells and tanks, which are also used The people are flithy in their habits. No consertancy become impassable during the rainy season, for initing and washing purposes.
	Pratabganj Rurol	168,272	ģ	\$3 \$1	10.43	13.			•
	Bungaon—Esra!	148,560		13-43	II.	**	Particulars regarding these rural tracts are not yet available.	ot yet available.	. (
	Unerpur—Reral	206,508		99.13	1.26	;°	The drainage is defective Water lodges I everywhere, and makes the place not only damp, but unhealthy.	Is taken chiefly from wells. The riparian villaces draw their water supply from the river Ganges.	The drainage is defective Water lodges is taken chiefly from wells. The riparian villages The people are indifferent to personal cleanliness. The receipt and makes the place not only draw their water supply from the river Ganges. An arrangement exist; the pathways are covered with refuse, straw, cowdung &c., Defection is promistication.
	Kotareah-Raral	77.644	10.	20.32	99	8	09 Particulars regarding this rursl area are not yet available.	t sveigebr.	

The conservancy arrangements of this to than before, burface cleaning is imperfut to forward of adequate establishment. It have public fatrines for makes and monagainst nine for makes and one for few against nine for makes and one for few The other latrines have gone out of use 'maintained by the municipality. The exist in a bad condition, and are exy little used in habitants are said to have these other their own; but they are lill-constructed and and grass structures. Night-soil from the is said to be frenched. That from the is said to be frenched. That from the jungles surrounding the town. The co-cuttle-sheds and the markets is satisfact of the private spikers daily and the private spikers bouse is very both interments and cremation are properly.
The crainage of the town, although much improved, is still defective. The fall is from the farm the fall is from the farm by the fall is from the farm by the fall is from the farm by the fall is from the farm by the fall is from the farm by the farm by the farm by the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and the farm and an electroded in many places. The defective. The fall much became the farm the farm and th
The drainage of the town, although much improved, is still detective. The fall is from morth to south. The Laigent drain, which has been completed and works satisfactorily, has been made to carry of water in the above direction. Many of the drains are kutcha, and are obstructed in many piaces.
67. 82.
81
15. 26.
*
186.06
;
ьтича – Тов'я

The houses are built of split hamboos with thatched rook, and are raised on mid plintis. They are diry and kept clean, but having only one door and no windows, are ill-rentilated. Swepings, refuse and filth of all sorts are thrown and accumulated near houses. Cattle are help tobe to dwellings and are crowded together. Their litter is partially removed and dried for fuel and occasionally used as manure; but much remains rotting in heaps near the dwellings, and with the urine soddens the soil with organic matter, which also drains not into pold by the rondiades and between the houses. We conserrancy arrangements exist. Fields and paths on the outskirts of villages and waste places between houses are used as latrines. Roughs are citien and some are planted with trrest. Dead cattle are thrown everywhere in ditches and on the outskirts of villages. Hindus turn their dead on the hanks of the river incompletely burnt. Manomedars bury at a little distance from their houses, but at no fared site.	Houses are crowded together and ill-remtilated. Their floors are damp. Conservancy arranements exist. Sweepings and refuse are thrown near houses, and cowned in the fault is heaped in from of them. Oattle are kept in the compounds of houses. Deforeation is carried on mostly in the nearest fields, but the footpaths, which are otherwised divided the rived heaped as fairines. Bed eattle are thrown outside the rillages, and in many pleace nearhouses. Some of the inhabitants burn their dead in the banks of the river bass, and some throw them into the river after only touching their mouths with fire.	Most of the houses are built on low ground. They are damp and ill-rentilated, and are crowded toggine. No conservancy arrangements exist. Befuse, &c., are not camored. Cattle are keys squarately but close to house. There are no proper reads, except some cart reads. There are numerous filthy diches around houses, which as well as the marcel fields and waste lands are resorted to for deforection. Dead exitie are thrown into the nearest control to the file and tittles for the Hindus burn their dead on the banks of the river Kost, and some throw the dead bodies into the river without burning them. Major medans bury their dead in the nearest fields at a distance of about half a mile from the houses. The people are, generally speaking, very dirty to their babits. They seldom battle or wasu teeir clothes.	Some of the houses are on high and some on low ground. They are damp, ill-ratilated, and crowded together. Compounds are sourcoundings of houses are very dirty. Sweepings and reluse are not removed. Cattle dunt is kept in beaps meat houses. The resdeays are very dirty. No conservably arrangements exist. The nearest directe, fields, and waste paces are recorded to the river. Kala Rout. Mahomedans scenerally bury their di ad outside the villages, but the well-to-do bury in the compounds of their own houses.
taken from shallow kutcha wells, very few of which have masonry parapets. The months of our wells are oben. In some places they are sured on your and are exposed to much pollution. Represe, then, then cowhedes are thrown near them. Bathing and washing berformed near the wells, their surface is always damp. The water inplyly in this thans is not sufficient. River water is not drunk.	Is taken from rivers and wells. The water of the wells is said to be good. Their mouths, however, are open, and their surface is always damp, as bathing and washing are performed near them. The banks of the rivers are used as latrines.	Is taken from tanks and shallow wells, and the wells are protected by masonry parapets. The moutise of the wells, however, are uncovered, and branches of trees overhang them. Some are surrenneded by filthy pits and are exposed to much pollution. Bathing and washing are performed near them. River water is not drunk.	Is obtained from several pures wells and the river Kala Kosi. The water of the wells as said to be go but their months are open and are subjet to pollution. Some of them are near filthy pits and excavations.
Most of the villeges are situated on high land, and the natural drainage in them is little impoded. But the drainage system of the thuna is defective. There are no house drains; sewage and filthy water run out from the houses into the streets, and there soats into the ground. The fall is into the swampy tract of land towards the south-east. The low-lying portion of the Founty is inundated yearly. Some of the roads have side-drains; they are free from obstruction and are clean.	Some villages are situated on low and some on high ground. The former are subject to introduction, and remains under water during the greater part of the ranny season.	Some of the villaces are on high and some on Is low ground. The latter are subject to inundation every year. The water flows into the nurseque ditches and hollows, which impedes the natural drainage of the constry. In some villages there are no roadside drains.	Same as in thans Damdahs described above; but the southern portion of the thans is more low-lying and marshy, and therefore subject to iuundation.
\$	59	5	50 .
ş	3.	8	şî.
8	19 42	st at	20.02
9		<u> </u>	
138,7%	124,889	106,491	123,946
Purnesh—Raval	Kesta Amour-Bural.	Damdaha Rurul	Gondwars and Carragola - Rurel.

RATIO OF DRAINS PROM- PEP 1,000 OF POPULATION. SANITARY RETIMATE OF VILLAGES IN TACH CIRCLE UNDER THE HEADS OF-	Fopulation. Fopulation. Sinall-pox. Sinall-pox. Mater-supply. Domestic cleansing.	ish—Raral 200,012 '00 Some of the villaces are on high and some on its taken from rivers Ratna, Parman and Bahra, and low ground; the latter are subject to intendent process and fulchs wells. The water of the rilaces is less impeded, and that of the lower rilaces is less in the lower rilaces is less in the lower rilace	Drainage a defective. Numerous pits, ditches, listaken from shallow wells, tanks, and the river holes are obstructed in many places because the result of the power classes. Parmas and fiblis, in many of which latter jute is recognited in many places because they are not connected with each other lister are used as surrounding fields are inundated by the surrounding fields are inundated by the river harman. There are defective. Numerous pits, ditches, listaken from shallow wells, tanks, and the river are used as enclosures of the dwellings, after the new property is somewhat elevated with the side of the door way or are thrown thouses in allowed to are hindly but the surrounding fields are inundated by the river are used as lattines. Catile are housed senaritely, but we have noted the find dead are interesting to the river are used as lattines. Catile are housed senaritely, but we have a because it allowed to are thrown the adjoinant boltzeties. Not conservative transferences are finded and are interesting the removed and dried for fuel and occasionally used as manner. The interesting removed and dried for fuel and occasionally to the river of the will dead are cremated on the babase of the river of the village and a shall theel on the west of the village and a shall dead are interested within the village and close to because.	11 Some of the villages are on Math ground. Is taken from paces and knicks wells, usually Deninge is defective. It flows into numerous situated close to covabeds. The months of the pits, ditches, swamps and water channels, which are obstructed in many places became they are not connected with each other. The months of the profile are flithy. Relue of all sorts is thrown outside the pace place or pits containing stagnant water surround them, and they have became and washing are also performed at them, and they are proper reads. Intervening waste lands between houses. There are no proper reads and equipments of the princes. Bathing the villages, Britain and they are separated from deglines series and washing are also performed at them, and they make the worders and adjoining diches all requires. Lead cattle are the banks of those rivers and thrown into the dream and strong places prices. There are no proper reads. Intervening waste lands between houses. There are no proper reads in the dead are either partially cremated and thrown into the dream and adjoints of those rivers and they maked on the banks of those rivers which are the proper reads. In the proper reads. In the remarks the proper reads. In the proper reads and adjoints of those rivers knowly. Fariain, and Lechanary waste lands of the proper reads. In the proper reads. In the proper reads. In the proper reads. In the proper reads. In the proper reads. In the proper reads and adjoints of those rivers waste.
	Population.	200,013	94,115	107,652
	District. Same of Circle.	Arrariah - Ruraz	Purnesh	Reniganj—Raral

Houses are irregularly built, but not crowded together. They are, however, ill-rentilated, and their flaors, all-though raised, are damp. Junzle abounds in the villence, which as well as the wate hand around houses and fields serve as lattines. No conservancy arrangements exist, Sweepings and refuse are left near houses. Cartie are housed. Cartie are housed. Cartie are housed. Cartie are housed. Cartie are housed. Cartie are housed. Cartie are housed. Finial refuse. Ato, from houses are allowed to run into footpaths. Carcasses are thrown everywhere around villaces. Hindu deed are carried a mile away from villaces and are burnt there or thrown into daws and the Sudhannoo river, but at no fixed place. Mahonnedans bury their dead at a distance of about a quarter mile from their dwellings, and in some cases close to their dwellings.	The houses are crowded together and ill-rentilated. No conservancy arrangements exist. Sweepings and retues are not removed, but are thrown account houses. Defecation is carried on in the waste lands and on the banks of the rivers. In some villages jute is steeped in the tenks, the watering cattle. There are four burial poses and for watering cattle. There are four burial grounds for Mahomedans in the village of Rahadurgrounds for Mahomedans; the latter is overfilled with grounds for monthly the search some of the Mahomedans of other villages bury there are some of the Mahomedans of other villages bury there dead round about villages. The well-to-do Hindus burn their dead on the banks of the Kankai river, the rest throw them into the river Muhanunda.	s. The houses are built of split hambons with thatched as reofs, and are raised on mad plinths about two feet above the surrounding Head. Excepting the hale of the lower classes, the enclosures of houses are clean. But ower classes, the enclosures of houses are clean. But a seeping, &c., are simply thrown down and allowed to accumulate immediately outside the dwelling, or thrown into any adjoining holiows. The fluid refuse is usually thrown down within the enclosures of houses, resulting in a puddle. Earliers are about; the fields, footpaths, at d the banks of the rivers are need; the fields, footpaths, at d the banks of the rivers are need as such, pigs are kept in great unmbers, but while they are as tearwards and on the place. Dead cattle are thrownen also outstirts of villages. Hindu dead are greenally burted, not burted on the bunks of the rivers and pills, but they are occasionally theo banks of the rivers and pills, but they are occasionally interrred usually in private compounds close to houses and on the banks of the jails and tanks.	Same as in Purneah thans described above.	Houses are built on low land, and their floors, though raised, are damp. Surroundings of houses are unclead. Sweepings and refuse are thivbun around houses. No conservancy arrangements exist. Deferention is carried on promiscously on waste lands and fields. Cuttle are kept close to dwellings, and their litter is kept in heaps and partially dired for the land coessionally used as manure. Rindt dead are burnt on the banks of watercourses or thrown into them. Mahousedans bury their dwellings, but at no fixed place. Dead cattle are thrown into nearest diches and fields.
brained from shallow kutcha wells, which as tratted in objectionable sites with filtipy in a distribute around them. In some cases that e close to cowsh-dreand are liable to pollution athing and washing are performed at them.	taken from filthy pools, tanks, wells and tirers Mohanunds and Kanksi. The warter he Kanksi is very bad, and its banks are us s lattines.	taken from numerons shallow wells, tank hils and the rivers Mohamda, Bronverung henga, Pulls and others. The water of this is highly polluted by the steping of jute hem, and whe banks of the rivers are freety us a latrines. The wells are usually in the viet of the dwellings and exposed to much polling; they are commonly simple excertations he ground.	Same as in Purneah thana described above.	Is taken mostly from wells, which are situated in offensive sites and close to filthy pits and differes. The water of the wells is impure and unclesu. The low caste people ebtain their drinking water from the river Gora.
Villages are situated on somewhat elevated ground, and are not therefore lable to inudation, but the surrounding fields are inundated every tear. This thans being less swampy than the others, its natural drainage is less impeded.	(.00; Most of the villages are generally low-lying and Is are independed by sluggir.h madde—branches to fithe Kanhan river—and semi-silted up water—to fithe Kanhan river—and semi-silted up water—to subject to inundation in the rains. The soil of the thana is sandy, damp moist, and water-lugged, is sandy, damp moist,	The thave is rich in water-courses, but as it is borders upon and forus part of the Tern, the borders upon and forus part of the Tern, the markes are common. Valuace is also impressed by sheing weirs. Villaces are generally low-lying with considerable jungly undergrowth near the house, which are usually situated near a water-course or usually situated near a water-course or usually situated near a water-course or is usually situated near a water-course or is usually situated near a water-course or is usually situated near a water-course or is usually situated in the rains.	Some of the villages are on high and some on the ground. Drainage is defective. It flows into numerous ditches and swams. Soil being sandy and dry, absorbs the moisture.	Most of the villages are on high ground and are not therefore liable to inundation, but the surrounding fields are intandated every year. There are numerous awamps and marshes.
10.	\$	1 2	1.03	99
	15.46	88.	\$3 \$3	91-91
	56	8	\$	
158,100	196,142	690'1.13	134,275	115,081
Kissonganj—Barat	Bahadurganj – Pra- rat.	Kalispanj—Rurot	Endws and Saif. ganj-Baral,	Bulranyar – Asrai

SANITARY BSIMATES OF VILLAGES IN BACH CIRCLE UNDER THE HEADS OF-	Drainage. Water-supply. Domestic cleansing.	Except the southern portion of the thans, Is taken from wells, tanks and the river Koei. The wells are in bad order and require repairs, their compounds and surroundings are very fithy, numerous pools, hollows and high reants and the ranks receive the honse drainage, and farinase flows into them. The natural artempt is made to improve it. Attent to the compounds and surroundings are very fithy. In the wells are in bad order and require repairs, their compounds and surroundings are very fithy. In the register is the receive the honse drainage, and damage, and fithy tanks and wrate hands and surroundings are very fithy. In the register is the real same from the reason of streets, being apparation the banks of the rivers, but in the catreme southern portion of the thans it they are thrown into rivers damage. The wells are in bad order and errounds are very fithy. In the receiver the honse drainage, and strength are banks of stanks and wrate hands and subject to including are very fithy. In the receiver the honse drainage, and even so is received. The banks of stanks and wrate hands are used as latrines. Castle dung lies rotting in heaps in a receive of the pipere is deficient, and no standard are and even way. The wells are in the receive the honse drainage, and fither and wrate hands are very may. The wells are in the rest of streets and wrate hand are and even way are the partially used as a fuel. The fither are the received the partial that the received the partial that the received the received the partial that the received the received the received the partial that the received the r	The drainate of this fown is very defective. The drainate of this fown is very defective. The drainate of this fown is very defective. The drainate of this fown is very defective. The crime are several purces and furthe drains or less filty; tanks and wells. There are 10 Government is and which are the protected, and into which river water is led during floods through the seponis of black puried fluid, and smell which river water is led during floods through the purces drains. The private tanks are generally blocked and form shorts and the largest house a wash of the series and series and are used for all purposes. The wells being mostly unprotected, respected, which are only of mast structured and difficulties in thickly populated localities, and despite their contents in the when removed is treached near by, and that from the public lattines when removed is treached near by, and that from the private lattines when removed into any conversion parties are many graves or in the private lattines when removed into any conversion parties and distinct them during the rains. The wells being mostly unprotected, respective in the series of the wells being mostly unprotected, respectively be prefer defecenting elsewhere. There water of one of the wells being mostly unprotected, respectively between the public lattines when removed is treached mear by, and that from the private lattines when removed into any conversion parties and the latting the remarken are satisfactory. The water of one of the well to be removed into the private lattine with remarken are satisfactory. The water of one of the well to be removed into the private lattine with remarken are satisfactory and the first in the lattines when removed into the lattine that the lattine is the lattine to the market is bad, but that of the slaughter-house is fair.	Most of the villages are raised and above in- Is obtained from wells, jhils, and rivers Mohamanda, sepecially those near the Bhazirutti, Kalindra and Pagia. The water of Bhazirutti and the numerous always the rivers is highly polluted by washing of corpses into are numerous kellages rivers. There the many months after the rains. Is obtained from wells, jhils, and rivers and dry, but they are ill-ventilated. Some of the villages are raised and dry, but they are ill-ventilated, and the numerous darks there of all sorts are thrown and account to the paths. No conservancy areancements exist. The nearest diches and dry, but they are ill-ventilated, and ill sorts are thrown and account to the paths. No conservancy areancements exist. The nearest diches and dry, but they are ill-ventilated, and ill sorts are thrown as the rivers is the part of them are very and account to the paths. No conservancy areancements exist. The nearest diches and dry, but they are ill-ventilated. The nearest diches and they ill they are ill-ventilated. The nearest diches and they ill they are ill the nearest diches and the paths. No conservancy areancements exist. The nearest diches and the numerous darks are raised and in they are ill the nearest diches and the numerous darks are thrown and the numerous darks are not and they are ill the nearest darks are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not and they are not are not and they are not and they are not are not and they are not are not and they are not are not are not and they are not
	plainia.	which the which the which the draining attem	The draft of the d	Most of undative parts of the of the see un for man
S FROX-	-mon-lewed	<u>\$</u>	ž	
RATIO OF DEATHS FROM- PER 1,000 OF POPULATION.	-erselore.	And the second s		94 •••
1,000 c	Fever.	20.23	8 215	90.48
RA PER	.xog-llam8			
	l'opulation,	24,466		72,615
	Name of Arcle,	Nanibari— <i>Bural</i>	English Bazar-	English Bazar and Rholahat - Eurei.
	District.	Porneah	·	

j	V	i	i

Old Maldah – Town 6,533	į	왕. 요	1:08	1.63	Drainage is very defective. The low ridges between corresponding high strips of land, which form a disting, takining feature of this town, are the principal outlets of drainage. In places where the levels have been interfered with by the taking of earth, water oullects and forms foul cess-pools. There are extensive purea drains along the sides of the servers, but they are blocked by rubbish, &., and are in a fithly condition. No attempt is made to keep them clean.	bout two-thinds of the people of the town tal- their drinking water from the river Mohanand, which is sepriously polluded by deforeastion on it anks and by the throwing of dead bodies in: it. The rest of the people draw their supply, was are from the river Daksanakunda, Daha jih anks and wells. The tanks which are flushed anks which are flushed and wells by river water are used for all purpose There are several protected wells which as used solely for drinking, and the rest of the sells are in a more or less satisfactory condition become of the private tanks are very objectionable	there is practically no conservancy. The whole of the town is littered with filth and rubbish. Rubbish, &c., is lit in heaps on the streets and byle-lanes. Deforeation is premia-uously carried on on the banks of the rivers of and in the numerous hollowr about the town. There are no public learnes. The private prives are never cleaned, they drain into the hollows and drains. Hindens bury their dead on the banks of the rivers. There is no fixed place for burning. Mahomed and the result is that the graves are dug by jacks, the corpses being thus often exposed.
4 5,361.		89.48		i	No special information is yet available.	Is taken from rivers Kalindra and Mohananda. Quality of water not stated.	No conservancy arrangements exist. Sweepings and rubbish of all sorts are not removed. The villages are in a very filthy condition. Cattle are housed in open sheds adjoining dwelling-houses (tattle dung and litter lie scattered all over the villager. Pouple ease themselves on the banks of the river Mohananda and on the footpaths, Hindu dead are thrown into the river.
54,317		83.53	F		Particulars regarding the sanitary condition of this thans are not yet available.	this thans are not yet available.	
80.024		22. SS	29.1	S	The villages are situated generally on low ground and are flooded in the rains.	Is taken from ri ers Ganges and Kalindra and shallow wells. The water of the rivers is highly polluted by surface drainage and corpaes, and also by the banks being generally used as latines.	Honess are substantially built and are at considerable intervals: villages are full of junzles. Swappings and refine are not removed, but are accumulated near house. Defocation is promisecously carried on. Cowdung, is heaped by the sides of hones. The Hindu deed are thrown into rivers. Mahom-dans bury their deal by the sides of roads and in the compounds of houses,
108,051	•	26.21	.89		Villages are generally low-lying and are sub- ject to extensive intudation by the Games. Drainage is obstructed by numerous ditches and ponds. B. adside drains are very filthy, and are full of filth and retuse from houses.	Is taken from the rivers Ganges, Kalindra, Ghoga, and Kunkhul, and tanks and wells. The rivers are highly polluted by the corpses and surface dramage, and by their banks being used as latrines. Bathing and washing are also performed in them.	Houses are built on raised floors. They are crowded in places and ill-ventiated. The intercenture spaces between honess are very dirty; they as well as the dirticlap chancels and river baths are used as latrines. Retuce of all scrits is thrown around the houses and into ditches. Cattle sheds are separate; they are unclean. Covidung is kept in hengs near thisse, but a cattle are thrown into the nearest fielits. Hindu dead are burnt on the river banks; some are thrown into rivers. Mahomedans bury at a distance of about one mile from their houses.
62,810	5	ST-98	1:57	.15	Particulars regarding the sanitary condition of this thana are not yet available.	this thana are not yet available.	•
115,692		92.03	- 66 		Same as in English Bazar-Bural described shore.	Same as in English Bazar - Rural described above	Same as in English Bazar—Bural described above.
102,162		87-78	ନ	i	Villages are generally iva-lying surrounded by marshes and subject to inundation. Numerous filthy pools interspersed throughout villages receive the drainage which stagnates in them.	Is taken from rivers Ganges and Mohahands, we'lls and tanks. The quality of the water has not been stated.	Villagees are generally low-lying surroun. Is taken from rivers Ganges and Mohahands, wells and deribe and subject to inunda- and tanks. The quality of the water has not a decine juncte. Reduce and a streets, Teople case then-throughout villages receive the drainage been stated. Samboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the rivers and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands. Reduce the sand all the reconstant and on waste heart and on waste hands. Bamboos are steeped in the river and on waste hands, Bamboos are steeped in the river and on waste hands. Bamboos are steeped in the river and on waste hands are the south end of village. There is a burial-ground in the village of Moharajur, which is quite insufficent dead out the banks of the Ganges.

App.	VI .]			(cl	viii		
R THE HEADS OF-	Domestic cleansing.		•	Surface cleansing is attended to. All the streets and lanes are swept daily, and the sweepings, &c., are carted off to the piace and there burnt. The condition of the cow and other cattle sheds is unobjectionable. There is only one public latrine near the Bhairub ralso with separate companyments for females, Bhout this own with separate companyments for females, About three-fourths of the limbilitaria are said to have privies of their own, but they are not regularly cleaned. There is no trenching ground. The night-soil from the privies is carried beyond the limits of the form and thrown on the surface to dry up. This is objectionable.	The houses are generally erected in lines along pathways, but they are devoid of internal ventilation and crowded with inmates. Cattle are kept within them in some places, but they and their cont-yards are usually swept carefully. No conservancy arrangements exist, but the roadsides are not often resorted to for defocation, &c., and consequently the villaces wear a cleaner appearance than is generally the case in rural tracks. Cremation is carried on on the banks of the Ganges, near a rivulet or at the foot of a hill, and a piece of waste land near the village is used for burials.	The houses are mud-walled with thatched roof, but they are without ventilation and crowded with imastes at night. Sweepings and other house-refuse, both liquid and solid, are soormulaked in every village near each house. The cow-sheds are widin the compounds of houses, and are not kept clear. No conservancy arrangements exist, and there are no roads in many villages. Defocation is promisenous.	The dwelling-houses are scattered, walled with mud and flatched with straw. They are devoid of internal ventilation, and are crowded with innates at night. Sweepings and other house-relue, both judind and solid, are accumulated in every village near each house. The cow-sheeds are within the compounds of the house, and are not found clean. No comservancy arrangements exist. Cremation is carried on on the banks of rivulets and at the foot of hills, and burnels of the flatton median dead take place on waste lands selected for the purpose.
SANITABY ESTIMATE OF VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	Water-supply.	this thana are not yet available.		Is obtained from tanks, bundha, wells, and a hill stream. It is sufficient in ordinary years, but runs short during periods of centinued drought. Only one bank, called the Ashak rank, has been set apart for drinking; the others, as well as the bundhs, henge resorted to for miscellaneous purposes. Three alter are not properly protected from pollution. The custom of throwing sweepings in the catchment area of the bundh, and either leaving or burning them there, should be at once discriptinued, as it must seriously foul the water-supply. A bundh is under construction near the sub-divisional officer's house, which will be a converience to the people.	Is taken from small wells and fivulets, the water of which is said to be good,	Is taken from the river and from wells. Tanks are used for bathing and washing purposes.	Is taken from the river and from wells, Tanks are used for bathing and washing purposes,
SANITAB	D ainage.	Particulars rexarding the sanitary condition of this thana are not yet available.	•	This town being favourably situated, the Inatural drainage is good, but the drains are not well looked after. They generally empty into tanks and budds, and in converses into h.l. atrams. Some of the drains at manfacient in expactive and require widening in places. The purca, side-drains throughout the town are generally in good order.	The natural drainage is good owing to the linge sites being on elevated ground.	The natural drainage is free, owing to the vilages being situated on elevated ground,	Drainage is defective and obstructed in places. The ground being unequal in level impedes free surface drainage of rain water, which consequently accumulates, and, by sub-soil soakage, renders the soil damp.
7M- 10M-	Bowel-com- plainte.	91.		20 17 04	þ	1.	7
RATIO OF DEATHS FROM	Опорыта.	1.12		3	16	F	ä
OF DE	Peyer.	94.28		78.4	18.07	14.6	10.31
RATIO FER 1	.xoq-llam8			•	<u>2</u> 09.	:	10.
	-noilaingoq	66,453		8,005	389,465	363,186	845,318
	Name of Circle,	Nawabganj—Raral		Deoghur—Town	Decebur and Jam- tars (Madhupur and Sarath)— Rural.	Dumka—Baral	Rajmehal (Saheb- Ranj Burers)—Ru- ral,
	District.	Maldah		,	Sonthal Pergumahs		

•	Pakour (Mahespur)	204,919	-	9.71	ž.	.03	Drainage is defective. There are pits and excavations into which the water flows and stagnates.	Is taken from tanks, wells, and rivulets. Well water is said to be good.	The houses are crowded tracther and are ill-rentilated Sweepings and refuse matters are accumulated near the dwellings, and removed only when required for manure. No conservancy arrangements exist. Defecation is promisenous.
Southel Perturnahs	Godda (Mohagawa and Podarya)— Enral.	348,49	i	13.89		1.	The natural drainage is good, owing to the villages being situated on high ground.	Same as in Dumka rural described above	Same as in Dumka thana described above.
	Sahebganj—Town	8,507		27.13	15.21	\$	The drainage is satisfactory. There are both pucca and kittcha drains. The new pucca drains were nowhere clean or in the condition in which they ought to be. This should be looked to.	Wells and the river Ganges are the chief sources of the drinking water-suiply of the town. Much inconvenience is felt during the dry season when the main steam of the river recedes to a distance. The present supply is not quite to a distance. The present supply is not quite sufficient for the requirements of the town at all seasons, and requires to be considerably supplemented by the provision of more wells at convenient places. There are two municipal tanks, but they are used for all purposes.	Surface cleansing is fairly well done. There are five public latrines. About half the inhabitants are said to have pivate privies consisting mostly of sundaness. They are attended to by municipal mothers, and seem to be well manazed. The might-soil is properly trenched. The arrangements under the head of "disposal of the dead" are on the whole fairly good.
	Cuttack—Tvan	8 8	99	92.60	9. 9.	12.	Drainage is on the whole fair, excepting that when the Katjuri river is in flood the discharge of the main drain which empties into the river is stopped, and the town drainage is leaded back. The house drains are generally filthy.	is both deficient in quantity and bed in quality. The chief sources from which waters drawn arewells, tanks, and the rivers Muhanuddi and hatjuri. These are open to all sorts of pollution.	The arrangements under the head of conservancy are on the whole very delective, and in some infamores highly objectionable. The arrangements relating to the disable of the dead are far from satisfactory. The town, moreover, abounds with filthy pits and hollows containing water of the fonless description and foll of decaying vegetation, wfich constitutes a standing menace to public health, and as such requires to be got rid of as early as practicable.
. Cuttack	Cuttack—Baral	155,336	7.	&	9	86.	Drainage is defective. The kutcha roads and kootpaths often serv. as drains.	is defective. The kutchs roads and Is obtained from rivers Mohamuddi and Katjuri, wells, tanks, and running streams. The watter of the wells is generally good; that from the rivers is often, during outbreaks of epidemic disease, such as choieve, small-por, &c., contaminated by the burning and burying of the dead on their banks.	The dwelling-houses are crowded, but freely ventilated. The personal cleanliness is limited to bathing. Cattle should are situated within the inner yards, and none of them are perfectly clean. Conservancy arrangements don't car in any of the villages. Sewage and refuse, ac, are heaped up in and around houses and on the nurroundings of villages. The people reserve for the purposes of sature to jumples, fields, roadsides, surroundings of tauks, and any other available places.
,	Jajpur—Toera	ii sa ii	‡	4.1		4 6:3	The drains discharge into the river. Their condition is said to be g od, but there is no regular establishment to look after them. Coolies are employed annually to clean the drains.		Is taken from wells and the river Baitarani. The Surface cleansing is partially attended to. The princisity by its said to be good excepting during the paint of the river Baitarani. There are 16 wells belonging to the manning to th

			RATIO PER 1,	OF DEA	RATIO OF DEATHS FROM-)M-	SANITARY E	SANITARY ESTIMATES OF VILLAGES IS BACH CIRCLE UNDER THE HEADS OF-	I THE READS OF-
District.	Name of Circle,	Population.	.xoq-llam8	Kever.	Cholera.	Bowel-com-	Drainage.	Water-srpply.	Domestic cleansing.
	Jajpur-Raral	239,503	ş	2.2	1.38	1.24	The villages of this thans being situated more or less on elevated levels, the natural drainage is fair.	Is taken from wells, tants, rivers, and running streams. The supply is abundant, and pretty good.	The condition of the surroundings of the dwellings and their contryacts and entilested is fair. Ventilation is, however, defective. Country roads and common streets are kept pretty clean. No conservancy arrangements are kept pretty clean. No conservancy arrangements are kept pretty clean. No conservancy arrangements are and sources of water-supply.
	Angul - Zoom		Not available,	ilkbe.			There is no system of drainage: the streets and roadsides serve as drains,	le taken from wells. There are six pucca wells, all of which are surrounded with masqury parapets. The level of the water in them during the hot season is generally 30 feet telow the ground surface. The Mathus, a small river is also resorted to, but it dries up in the hot season, there is also a big tank the water of which is excellent,	The dwellings, which are freely ventified, form two lines with a broad pure road between, artending to a length of one mile. The cattle-sheets are situated close to the houses, and the rubbiash from them is runored and beaped up buhind each house. There are no conservancy strangements, but refuse, &c., are carried to the outsitie of the town.
Cuttack	Kendrapara—Town	15,697	3 5	92:9	165.	1.65	There is no drainage system. The roadside Is drains are connected with the jhils, which discharge into the fields beyond the town; the water is thence drained back into the Gobra nullah, which runs through the fown. In consequence of this, no artificial drains are required.	taken from the Gobra nullah, the canal and anis. It is said to be good and sufficient for both druking and other purposes. In the bot weather and before the canal closes for repairs, water is let into some of the tanks.	Surface cleansing is attended to, but not sufficiently. Sweepings are utilized in filling up holes and depressions, and arrbage is buried. There are no public latrines, and defecation is promiscuous. The arrangements connected with the disposal of the dead are satisfactory.
٠,	Kendrapara – Zura!	176,523	1.03	95 6	2.5 8	2.18	Drainage is defective. The streets, which serve as footpaths and drains, are kept filthy.	is taken from wells and tanks, which are not properly protected from pollution.	The floors of the houses are damp and ventilation is generally defective. Cattle-shoel, and courty-ards are kept unclean, and refuse, &c., are collected behind houses.
•	Aul-Burof	91,015	\$	14.72	6.57	5-0-2	Drainage is defective. The village roads which legere both as pathways and drains are simply narrow footpaths between the rows of houses.	Is obtained from rivers, wells, and tanks. The river water is contaminated by burying and burning of dead bedres on its banks. The wells are everywhere protected from inward drainage by means of good parapets.	The houses in many villages are damp during the raina, their floors being almost on a level with the surrounding country. Cattle-shold are close to the flourea, but are kept clean. Conservancy arrangements do not exist in any village. The people deforcate wherever they find it convenient to do a, and redues matters of all descriptions are thrown into ditches. Firstwood being very dear in this part of the country, the people are mashle to afford sufficient feel for burning their dead, and thus the bodies are sometimes only slightly burns and thrown into the rivers.

		e e	· CITT		
Almost all the dwelling-houses from made of smuk. They have it il-worked as the interpretate and counterants are larged, but the conduction and interpretate in the sector party, but the covading and reduse matter are besied behind houses. No conservancy arrangements exist in any village. The roads are used as abrunes at inguis. The burying and burning places are far from cleck village and its softces of criticing water.	The dwelling-houses are overcrowded and ill-remtlissied. Negligence in personal cleanlines, excelerame in adopting proper means for the removal of sevenge and retination from the imperfect way. In which the court-yards and surface foundings of houses and cattle-briefs are desired, sittle combines to consist in this thans. We combine to consist internal and anti-properties of the state of the seven and consist in any village.	Same as in Cuttack—Eural described affive.	Same as in Kendrapara – Baral described above.	The houses are built with mud and roofed with thatch, and are overcrowded with immades at anyth. The floor, with very few exceptions, are free from ground darking. The floor, with very few exceptions, are free from ground darking in melected. Portions of dwelling houses, and in each case of sleeping rooms are used by the pion five nearly their critic at midt, Cordung is accumulated in piecescaried as a little distance from the demiliant. Reting and rubbinh are heaped up close to many house. The rillage house the edition and rubbinh are heaped up close to many house. The rillage house is thrown into khals near the fillages. House sweetings and rubbinh are heaped up close to many house. The edition are links at night, for consurrancy arrangiated as ingering in any village.	The drellings are mid-walled into with stress seefs. Ventitation is insufficient. Cowpleted in most cases are boosted near the drelling-backer, and almost all of them are dirty. Cowfung is accommond in pits at a little distance from the dwellings, and is removed only once a year. Best cattle are removed to waste land at a convenient distance from the houses. Itsunation and interment of the dead are-generally during an avaite hand for from the villages and someone of water-and so waste land for from the villages and someone
Is taken from wells and tanks. Well water is good, but the tanks are unprotected, and are therefore liable to contamination.	Is taken from wells, tank and jheels. The quality of the water is impure, as it is polluted in various ways.	is obtained from wells, tanks and rivers, and from the main and sub-canals. The water from the first three sources is excellent.	Is Strained from rivers, wells and tanks. The river water is contaminated by the burying and burning of dead bodies on its banks. The wells are everywhere protected from inward drainage by means of good parapets.	Is obtained from wells, rivers, tanks, libesls and khals, the last two being subject to contamination in various ways, cause storiess, such as clablers, dever, cold and bowel-complants, to those who draw their water-supply from them.	Is taken chieffy from the river Mohanudy, but, from tanks also, which are numerous. Very few of the tanks, however, contain good water.
Drainage is very defective. The roads and pathways serve also as drains.	Many villages in this thans are situated on low levels. The drainage is defective. The roads and pathways serve also as drains.	Drainage is not free anywhere, and the streets serve also as pathways and drains.	Drainage is defective. The pathways, which also serve the purposes of drains, are kept clean.	The villages of this thans are situated, some on elevated and some on low lands. The dainings is defective. The roads which are lated, are not provided with side-drain, and the streets answer the purposes of drains.	The villages are situated more or less on comparatively high levels, but notwithstanding this the drainage is very imperfect.
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25		22.1 22.1	3	5 9.6	79-8
19.8	. 50	8.9	11-23	. 11.21	÷ ,
*	क्र	91.	83	ş.	39,
8.40,978	.188,677	215,001	. 109,401	248,763	35,990
Salopur - Revol	Ertol - Euras	sgatsingpur Bural	Patamundi – Berod	Distrimssis — Rurat	Banki—Berol

•			RATI(PBB 1	MG 40 0	RATIO OF DRATHS PROX- PER 1,000 OF POPULATION	103	BANITARY R	SANITARY ESTIMATES OF VILLAGES IN RACE CIRCLE URDER THE READS OF-	I THE READS OF—
District.	Naues of Circle.	Population.	Small-pox.	Foror.	Словеть.	Bowel-com- platats.	Drainage.	Water supply.	Dombothe chemoing.
· · · · · · · · · · · · · · · · · · ·	Pur.—Toers	484,784	<i>*</i>	10.03	16.78		The drainage is as bad as it can be, the whole place dally bosking in an enormons discharge of fluid of the worst kind, which during the rains becomes completely waterlogged.	The arrangements under the head of water-supply are very unastinate toy, and require to be wholly revolutionized. Drinking water is taken from wells and tanks. On chemical qualysis the water from these sources has been pronounced to be quite unfit for drinking.	Surface cleaning receives hir attention. The condition of cow and other cattle sheets is generally bad, and the dung, £c., from them are not, except in a few cases, properly disposed of, but collected within hong premise, where it rots and fouls the atmosphere. There are depthern public latrines for flates and three for fewades. The dry-sark pyrighn has been infectioned into let it is carried out very bedly. The night-online farming public and private privies is at flat collected in the sarreal night-soil depoks and them removed for disposal to the neptective trenching grounds every morning and flexunon in mechalic night-soil depoks and them removed for disposal to the respective trenching grades. The trenching system noon in mechalic night-soil decrease only of night-soil should be dug in lines one foot gleep and one foot with each bed up into them, the remaining space being vorwed with earth. Promiscous defocation is very great here. The arrangements reparation in consistence of a transforment is are not stable factory. Dead bodies are buried in aballow graves and at random. The arrangements in consistence with
Pari	Puri-Baral	197,349	3 4		14:31	T. +	The villages of this thana are mostly situated on fairly elevated ground, but the drainage is not free.	Is taken from rivers and tanks; the water of the latter is in some places choked with weeds, but the quality of the water on the whole is said to be fair.	The dwellings are chiefly muck-walled buts built in rows and crowded together. Cleanliness in democific matters is observed by trahmins, but the lower orders of the people are very filthy in their-habits. Conservancy arrangements do not exist in any village. Beforestion is promiscuous. Cremation and interment of dead bodies are generally carried on at a courement distance from the villages and sources of waterseapsepply.
•	Pipil—žeral	226,762	8	8	86.9	86.8	There is no drainage system, but the natural drainage of this thans is for the most part free.	Is obtained from rivers which dry up during the hot season, but water is also drawn from other sources, viz., tanks and wells, which are kept in good order. The quality of the water is good and the quantity sufficient throughout the year. The tanks, which are situated close to the pifgrin road, are, however, polluted to a great extent by all sorts of filth, including human excrets.	The houses are built conveniently spart from each other, and their floors are not damp. The villages, with very few exceptions, are free from imagics, but most of them are aurounded with conceant, theopelm sad bambo clumps. Cattle are housed in a heats built in from of the dwellings, and their dung and urins are removed. Domestic cleaning is fairly extended to. Delication is promiscrious. Places selected for cremation and inferment of dead hodies are far from the villages and sources of water-supply.
•	Kburda - <i>Ekral</i>	269,478	Ę.	1.87	83.6	61	Although the villages are situated mostly on ligh ground, the natural drainage is defective. There are no drains as all.	Is taken from wells and tanks; the latter dry up during hot season.	The houses are built close to each other, but are freely ventilated in most tasse. House refuse is not properly disposed of. Outlet sheds are built separate from met with on their sides. There are no conservation arrangements, and deformation is carried on anywhere and everywhere, and everywhere are being arrangements, and deformation is carried on anywhere and everywhere, the formation and interment of dead bodies are carried on far from the villages.

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The house have straw roofs, and are built on raised mad floors. Cattle are numerous, and their housing is not becases are full ef covedung and castle litter. No conservancy arrangements exist in any village. The nearest convenient places are resorted to for deforation. Cremation is carried on near jungles far from the villages.	The dveling-hoses are for the most past overcrowded with innates at night, and are ill-centilated. Domestic cleanaing is not at all attended to. Cattle are kippi in the lands built close to, and in the inner pards of, the houses, which are never perfectly cleaned out. The aurroundings of the houses are in most cases kept fifthy with beaps of sweptings and rubbiah. Conservants with beaps of sweptings and rubbiah. Conservants arangements do not crist in any village. Deficicled, for comercion and interment of the dead are too close to the villages.		Burface cleansing is properly done, but sow and exitie ordure is accumulated within house premises for manner in g purpoges. The rotting of these beaps of dung and then offered offered of the public beach of the propulsion of th	Particulars regarding the sanitary condition of the villages in these thans are not available, as they were not visited during 1887, the Superintendent of Vaccination being employed in other districts.	handbally being a seaport, is the sent of merchants' firms, and people of various described live there, so that it deserves to be cleased as a small town rather than as village. There are no public attrines in the place, although thousands of attrangers, anough pilerina to Jaggernach, gather together twice a week. Defending is promiserous. The arizngements under the head of hisporeal of the dead" are estimisation:
Are built and their and their coattle ny village to for de far from	the most part in the most part in the interest of cleans are in most case are in most case and rubbish. In any villace, The grounds the dead are together		me, but these her these her to the to the to the to the to the to the to the to the to the to the to the the the the the the the the the the	the Sa	franchally being a seaport, is the seat firms, and people of various despassis so that it deserves to be chansed as a man than as a village. There are, no public places although thousands of strangerer, and segremath, gather together twice a wee is promiscoons. The arrangements und "inspons of the dead" are satisfactory:
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see have Cattle dended are full y arrany ient pha	the dwelling-house are for with innates at night, and a clearating is not at all attri- tuded built close to, and, houses, which are never is surroundings of the houses with heaps of sweptings with heaps of sweptings with heaps of sweptings is carried on anywhere, openation and interment of villages.		cleansin is accun urposes, offensive offensive of as four er, are k m both t trenchin eroous	not visit	Chandbally being a seaport, firms, and people of varies to that it deserves to be clathan as a village. There are place, although thousands of Jeggernath, gather together is promicesous. The arrange the promicesous.
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Is obtained from wells and tanks; the quality of the water is good, and the quantity abundant,	is taken from wells and tanks. The form tain good water, but the latter are ever subject to pollution by surface washings.	·	is taken frout the river Bursbalaur, tents and wells. Four tanks and one well, which are not adequate have been reserved for drinking purposes. All other sources of water-supply in this town are impure.	the villa,	Is taken from the rivers Dhames and Baitarani, and from tanks,
			A 5 d d d d d d d d d d d d d d d d d d	dition of er distric	
low leve	r levels a let is defith side-		atisfacto g steadi gear 188 gear 188 gear 186 of the con lich, con house-dr d thus a	d in oth	seen con
rted on There i	ges are situated on low levels and are populated. Drainage is defective its are not provided with side-drains, village pathways are full of human		fairly see is being the see is being the see in the see in two one of when the see, the sid of, an remove	the sani	h have to to kee infipede
ing situ idation,	e situati nated. not pro ge path		formage is formage. During ment we cerduning wan, in o cea hou it y got re hou it y got re has be	garding on being	nts which direction t extent is port.
The villages, being situated on low levels, are liable to inundation. There is no drainage whatever.	The villages are situated on low levels and are thickly populated. Drainage is defective. The roads are not provided with side-draina, and the village pathways are full of human excrets.		The natural drainage is fairly satisfactory. good system of drainage is being steadily p gressed with. Durine the year 1887 chief improvement was an extension system of sancer-drains in two of the crown parts of the town, in one of which, consist chiefly by pucca, houses, the house-drain is now efficiently got rid of, and thus a spreat nuisance has been removed.	oulars re	The embankments which have been constructed in every direction to keep out the sea have to a great cartent impoded the natural dramage of this port.
The villa liable to whateve	The vi thickl The r and t excre	,	The nagrood group group group parts chief is nov	Parti	The en cd is have drain
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116,167	68,987		20,285	87,420 71,136 65,102 197,508 86,226 165,972 71,354 132,321 61,926	Data not available
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Raral	Sanpur— <i>Baral</i> .		Balssore—Tvus	Balsove-Rurot Basta-Eurot Jellasove-Rurot Sovah-Rurot Balingi-Rurot Budrak-Rurot Budrak-Rurot Dhamdagar-Rurot Chandballi -Rurot	Chandbally Port
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•	Puri			Balascire	. 12

					clxv		•.		[App.
Personal cleanliness is not characteristics	A state of the state of the state of the state of pathways, and heape of decomposing countries on met with everywhere.	Most of the puece reads in the town are regularly swept every day. The dwellings, many of which are brick. built, are erected so close to each other as to preclude perflation of air. I here are three public latrines. I hay are puece, and kept pretty clean.	The dwelling-Bouses are for the most part small thatched huke, generally in a dispidated condition, and dirry which is chiefly due to accumulations of cattle dung and to pigs, which are kept in the compounds of dwelling-houses.	The town has become overgrown with low vegetation since its abolition as a union. A few houses are proteided with privies, which, however, are never cleaned, but the raj-rity of the people resort to the adjacent fields for defeneation.	The dwelling-houses are mere small huts without venti- lation, but they are kept olean. The bouse surround- ings are generally dirty, resulting from accumulation of cattle dung and house-sweepings.	Dwellings are generally made of mud walls and thatched roots covered with tites and erass. They are merely small buts without ventilation. Defocation is promisenous.	The dwelling-bouses are built of mud and roofed with ties. They are ill-ventiated. The villages are best and direction by the accumulation of cattle dung and house-refuse.	The villages in this thans are, as a rule, fitthy; refuse straw, cattle dung, and house-eweepings being accumu.	The villages are for the most part in a pretty clean condition. House-weepings and the rubbish are burnt at intervals, and cowdung removed to the fields.
-		Drinking water is obtained from several purca wells, which are provided with parapets, and surrounded by masonry platforms. Some of these wells are, however, situated on low land, and their surroundings are filtly. The water of the well in Kotolia is said to be pure and wholesome. Tanks are used for bathing and washing purposes.	Is from natural springs and kutcha wells, which are contaminated by promisenous use.	There are many puces wells and a tank in a tola called Porasi. The water of this tank is used for bathing and washing purposes. The wells are industriminately used.	Is taken from pucca and kutcha wells, ibeels, and instunal springs. The water of the pucca wells is generally good, but that of the other sources of water-supply is mawholesome.	Is taken from rivers, wells, and natural springs. The quality of the water is not bad, except in a few wells and natural springs which are spoil luted by promisenous use.	Drinking water is obtained from wells most of which are knichs. The graality of the water is not good, as it is polluted in various ways.	Is taken from wells natural springs, and nullas, all of which are polluted in various ways.	Is obtained from natural springs, puoca and tutcha wells, bundia, or tanks. Most of the last named dry up in the lost weather, and then the natural springs and wells are used promisecuously for all purposes, and thair water is poliused to a great extent.
) - -	nd the ground being undulating, is is prefty free; the rain water ito the adjacent bandhs, nullas, s.	The town issistanced on elevated ground slop- ing towards the north-east, in which direc- tion the greater portion of the surface drainage flows and ultimately falls upor the Heroenuddi, running on the east. The drainage of the villages largitestla, Ragiu, Bordin, and Kissunpore escape into the adjuining fields.	The drainage is generally good, except in villages situated on low ground which are liable to inundation.	The roads are provided with abeliow side, drains. The drainage is more or less free,	The villages being situated on elevated ground, the natural drainage is free.	The villages are situated on high ground, consequently the natural drainage is more or less free.	The natural drainage is good on account of the elevated position of the villages.	The natural drainage is free in most of the villages.	The drainage of the villages which are situated on low ground is defective, but that of those situated on high ground is free.
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61.		<u>\$</u>	!	i	3		3	96.	
15:59		72.61	77.87	81.18	£2.13	17.63	17.8	23.22	\$.
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80,572		11,900	52,118	7,346	58,875	47,084	70,437	59,302	57,029
Hazaribagh—Rural		ChatenTown	Chatra—Zurof	Echak — Toson	Gawan—Raral	Kashmar—Bu <i>ral</i>	Chowparun – Zural	Begods—Raral	Simuria – Reral

• •			RATID PER 1,	00 00 DE	RATIO OF DRATHS PROM- PER 1,008 of POPULATION.	DM 10M.	BANTTART	SANTIARY BETIMATE OF VILLAGES IN BACE CIRCLE UNDER THE READS OF	тив надре ор-
District.	Name of Girele.	Population.	Small-pox.	Fever.	Cholera.	-moo-lewoH striniq	Drainege.	Water supply.	Domestic cleansing.
	(Giridhi—Town	Data not available	availabl	:	!	:	This town is situated on sloping ground leatending from the south to the north and horth-east. It is divided by the Hazaribortion; the natural drainage of its southern portion; the natural drainage of its southern portion discharces into the side-drains of this road, but it has become defective from the drainage of the northern portion flows. The drainage of the northern portion flows.	Is obtain a from wells, most of which are purce, and well protected by paragets and surrounded with masonry platforms; but they are used promiscuously for all purposes, and their cones of percelation are filthy, and yet their water, the level of which is within 4 or 5 feet of the arriace of the ground, is rejuted to be of good quality.	There are a few pueca buildings, but the rest are mudwalled with tiled roofs, erected on low plints, and are ill-rentilated. About a fourth of the population have aurince privities of their own most of which are regularly cleaned; but the ninkt-soil instead of being trienched is thrown into the adjacent field. Deferention is carried on by the mighrity of the people on the roadsides and fields, or in any convenient or hidden corner.
	Pachamba or Giri-dhi-Rurel.	760,097		55 50 50 50 50 50 50 50 50 50 50 50 50 5		\$	The villages being situated on elevated ground, the drainage is more or less free.	Le taken from the rivers Ocsri and Burakur, several prulets, nulles, bands, and kulchg, wells. The rivers are chieffy used for waking purposes. On the whole the waker-supply is impure.	The villages are as a rule fifthy. There are no proper pathways. House-refuse and rotting cowdang are accumulated near the dwelling-houses, and premiscious defencation is commen.
•	inggeswar – Burol	88,598		85 58	.		The villages being situated on elevated ground, the natural drainage is free.	on elevated is generally obtained from kutchs, and in a few cases from pucca, wells which have fitthy survoundings, and are promisenously used for all purposes. The water-supply of this thans is also drawn from small attents and shallow pools.	Some of the villages are situated in jungly and hilly tracts. They are for the most part in a fithy condition, with heaps of decomposing cowdung behind, and arainst the walls of the dwelling-houses, and with the sathways covered with refine, first and rubbish of all kinds as well as with human excreta.
asridagh	Barhi—Baral	19029		17.76	7 8.	8	The natural drainage is free	is obtained from kutcha wells and from streams. The well water is of rather saltish taste, and not quite palatable.	Same as in Begoda thana, described above.
•	Dunri-Rerol	63,685		52.40		2.57	The villaces being situated on eferated ground, the natural drainage is free.	Is taken from wells, nollad and natural streams The level of the well water is at a considerable depth below the surface of the ground.	The general condition of the villages in this thans is meet like that of those in Ranchi thans described below.
	Kharakdiha— <i>Zural</i>	150,545	! .	16.55	9	.53	The sites of the villages are on elevated ground, and the natural drainage is free.	is from nulles or small streams, bandis, and vells, of which some are purce. The bandis are used for washing and bathing purposes. The wells, most of which are not profested by parapets and have filthy surroundings, are premisenously used.	With a few exceptions, the villages are small, and consist of clusters of tiled and thatched hits. The villages and the pathways are generally filthy, mainly because the village confains a larger number of cattle than it can accommodate. Ouwdang and refuse-heaps are to be seen everywhere.
	Koderma – Esrat	73,802	Ş	16.90	ş		The drainage of willages situated on high ground is free, but that of those situated on low land is defective.	Is obtained from wells, some of which are pueca and from small streams, which are used for bathing and washing officious and cattle. The quality of the water is not good,	In many villages the Houses are crowded together and secretly in the inferce of villages are kutche, narrow, and deminies, and are kept in a dirty sud mawept condition. Promiscuous defensation is general.
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	,			clxvii	•	[App. VI.
Cowding and other refuse are generally seen near dwelling-houses in simost all the villages. No conserancy arrangements exist. Defocation, is promiser.un.	Personal cleanlines is not observed, and the villages are, without exception, in a dirty condition. Promiscuous defocation is common and accumulations of cowdium, and house-sweegings are to be seen everywhere.	The houses are built of mud with tiled roofs, and are ill-ventilated and crowded at night. The villages, with some exceptions, are kept in a presty clean condition, house-sweepings and rubbiah being burnt at intervals, and ashes, retuse, straw and cattle-dung deposited for manure in pits in the fields at a distance. In some villages the cowdung from the dwelling-houses is used as free. As a rule the fields are resorted to for defection.		General conservancy is fairly well done, and the sweep- ings. &c., are properly disposed of The condition of the cow and cettle-shed is unoble-friends. There are hour public lathins do males and four for females. This number is evidently immilisent for the requirements of the town. More of these at convenient places are unrestly required. Night-soil is deposited in deep pits instead of in shallow trenches, and covered over with earth. More treaches, and covered over with niently situated to the public lattimes.	The house are ill-ventilated ands somewhat erowded together, and in some places the villages are surrounded by under-growth and low vegetshor. Many of the houses have tied rooks and are not damp. In some villages personal cleaniness is not observed. The poor villages personal cleaniness is not observed. The poor veep their cattle in the steeping-room of their houses at night. Heaps of decomposing for dung, wreaping and other retues are to be seen close to almost every once a year to the fields. Defocation is carried on on reasistics and their and dieds. Unreasses are known on adjacent fields to rot. The dead are buried close to because.	The villages in the north and west of this thans are kept pretty clean, extitleding and refuse being burnt as inelliges of the villages situated in the far south of this thans are close to finaptes. They are in a dirty condition. Cow-dung and house-wespings are accomulated in heaps in the front and at the back of almost every house.
The villages being on elevated ground, the Is taken from the river Moovahar as well as natural drainage is more or less free.	Is from rivers, nullse, bandhs, wells, and shellow tanks. The water from all these sources is more or less polluted.	Is obtained from rivers, wells, bandus, and nul- las. The bandus are gener ally used for weals- ing and bathing purposes. Some of the wells are purors and protected by parapets, but they are promiscuously used, and dry up in the hot weather. The running streams are polluted by the washing of clothes and cattle, and by de- forcation on their banks.		is taken from wells and tanks. The public wells are generally protected, but in the two at the public market the maximary is so much broken that it re-admiss spill water into the wells. The wooden frame work over many of the other wells is in such a dilapidated state as to be positively damerous. These defects require immediate attention. The tanks are used for bathing and washing purposes.	Drinking water is taken from kutcha, unprotected wella, which are also used for other purposes. There are tanks exposed to surface pollution, but they are only resorted to for the washing of eatile and clothers. In some places water is taken from davins, which are open to pollution. Where rivers exist, their water is used for all purposes. Water from the nullas is not drunk, but clithes and castle are washed in them. Jute is steeped in nullas.	Is obtained from rivers, wells, and jheels. Many of the wells are protected by puops parapets. The water of the jheels is not good.
The villages being on elevated ground, the Instituted drainage is more or less free.	The villages being situated on elevated ground, the natural dramage is more or less free.	The villages being mostly aituated on high ground, the natural drainage is free.	•	The drainage of the town, on the whole, is satisfactory. With one exception all the drains are kutcha, but they act freely.	The natural drainage is good, as the rainways water drains out completely into the fields. In some villares the drainage is obstructed by regetation.	The villaces being situated on elevated ground, I the natural drainage is good.
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69.63	85.08	24.11		6 110	14.12	17.
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86,984	72,963	65,730		18,443	122, 152	64,500
Hunderganj-Revol	Rengarh – Ewral	Tandus or Pathur - Estat.		Ranchi-Tours	Ranchi-Zurel	Daitonganj Rurel
•	Rasaribagh	*				•

pp. VI .]		·	clxv	iii [.]			
Dometic cleaning.	The pathways are filthy. Cowdung is partly used as fuel and partly stoned in heap for manutrum the fields. Pronisarous deforation and accomulations of covdung and hune-refuse of all sorts close to alequing-rooms obtain in all, the villages of this thans. Even in their persons the people are generally filthy.	The interior of the bouses is generally in a pretty clean condition, but they are ill-rentifiated. Cowdeng is removed to a distance and deposited in pits, in gardens or fields. House sweepings and rubbish are burnt at intervals. Defocation is promiserque.	The villages are generally filthy, and in some the bouses are crowded together and ill-ventilated. Pelcocation is promiseuous, and as a rule house-refuse, sahes, &c., are beaped beind houses.	The bonses are principally built of mud and rooted with tiles, a few houses belanging to the Harowarsheing pures and briet-built. The sleeping-rooms are close for an ill-centifisted. Cattle are here in abeds close fo, and, in some cases, in the dwelling-bonses. Cowdone is accumulated for manure, and house-streepings and refuse straw are thrown about.		The dwelling-houses are built of mud, and are generally thatched with staw. They are crowded to ether and ill-ventilated. Accumulations of cowdung and house-retines issued the villages and professions deferention are the compon drawbuchs to the healthinness of the people. The village bysatts are narrow, knich, unprovided with side-drains, and kept in a dirty and unswept condition.	The houses are damp in the rainy season. The villages are in a filthy condition, the pathways being covered with rubbink and refere. Houseverture and coveding the heaps are to be seen close to house. Befressiou is promiseuous. The dead are cremated in adjacent fields and on banks of streams.
SANTARY BUILDATE OF VILLAGES IN RACH CIRCLE UEDER THE HEADS OF Water-supply.	to depend entirely upon daris upply for all purposes, but a them have bandhs or nullas and bathe in. In the hot one of the bandhs dry up, the is used for all purposes.	Is had from natural springs, rivulets, kutcha wells, and taaks, and in a few places, from the river. In some villages tanks are set apart exclusively for drinking purposes. The natural springs and wells are promiseurously used, and their water is consequently impure and unif for drinking. The river water is also considered pure.	Is taken from bandla, natural springs and rivalets, which are polluted in various ways. Wells exist in some places, but they are tutchs and are each promiseuously.	Is taken from tanks, the water of which is polinted in various ways.	re not yet available,	Is obtained from bandhs and tanks, which are to be found in the neighbourhood of almost every village. Several of the bandhs and tanks are said to contain drinking water of good quality. Barry, however, have their banks overgrown with weeds and low vegetation, and are liable to be polluted by starface washings.	Is obtained from wells which are mostly kutchs, promisencesty used, and in a dirty condition, also from tanks, streams, nulles, and natural springs. The tanks are often polluted by surface draimage, &c. The river water is polluted in various ways, and in several tanks, rivulets, and marshes jute is streped.
SAPTARY Drainege.	The natural drainage is said to be more or less free ownsk to the elerated position of the village sites.	The villages in this than are situated on Interpretated ground, and consequently their ratural drainage, which discharges into the adjacent fields, is good.	The general undusting nature of the ground on the ridges on which the villages are, as a rule, situated, help to drain them more or less completely during the rains.	The villages being situated on elevated ground, I the natural drainage is free.	Particulars regarding the villages of this thans are not yet available,	The sites of the villages are in the vicinity of hills and low jungles, and on a higher level than the surrounding fields of rice cultration. During the rains water escapes into these fields.	Drainage is imperfect. Some of the villages are situated on high and some on low ground. Where streams exist, they drain the localities through which they pass.
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nollating.	67,989		104,140	122,023	89,078	95, 696	88,535
Name of circle.	Lodma (Kera)	Charea or Maudor-	Turps or Khunt- Kuzal,	Lobardugga — Rural	KorambeRurai	Tauri-Burat	Silli—Zural
District.				Loharduggs			

Singbham

		. .	•			•	clxi		٠	•			[App.
The dwelling-houses are built of mud on low plinthe, and are morely thanholed with straw. The alsoping-rooms are ill-rentilated, used as store-house, and crowded at night. Accumulations of house-reluse and cattle, dring are to be seen in every vilage. Defineation is prumiscuous.	Same as in Chores than described above.		•	The villaces are small and consist/of clusters of thatched in the erected on fow pinths. There are his and innefer in proximity to most of the villages. With a few exceptions the interior of the villages is in a flithy condition by the accumulation of decomposed estitedung in pits and by promiscuous defrocation.		The villages are remarkably fifthy. Heaps of decomposing cowding and rubbish of all sorts are to be seen close to every house.	Name as in Chores thans described above.	Jungle abounds in the vicinity of most of the villages in this than, particularly in the vicinity of those on the west and south of the police-station. The villages are with rare exceptions, kept in a flighty andiction, chiefly by the accumulation of cettle dung and retuse straw.	The villeges are in a more or less clean condition. The dwelling-houses are built with mud, and their rooks are mostly thatched with fore. Many of the houses are used as shops or chattees as well as dwelling-houses.		Same as in Garwa than described above.		Surface cleansing is well attended to, the sweepings, &c., being utilized in the jail garden. There are only two public and two iron (Hornbury's) latrines, but these fecution is carried on in fields out of town. Night-soil is properly disposed of.
Is taken from natural springs, which are generally in polluted by surface washings during the mine. Well water is also used.	Same as in Chores thans described above		as are not available.	Is obtained from natural springs and wells, and in some places from varrams that flow close by. The water in the wells and natural springs is polluted in various ways. The water of the safetam is also polluted by the washing of cattle and the cremation of the dead bodies on their banks,	I're not available,	Water-upply is bad and scanty. It is taken from wells, natural springs, and jhoras. The wells are generally used for all purposes, and their surroundings kept in a dirry condition.	Same as in Chores thans described above.	le obtained from pieces and kutchs wells and from natural springs, the latter being in most inspances the only source of water-supply in the villages in the south. In a few villages it is taken from small streams and tanks, the latter being generally resorted to for bathing and washing purposes.	Is taken from wells and natural springs, and from the nearest rivalets.	re not available.	Is obtained from theels and wells. The quality of the water is generally good.		is obtained from tanks, wells, and the river Khar-fair, The wells are well protected from pollution, but the Learing out of the tanks and wells is necessary.
The natural drainage is good, the rain water draining out completely into the fields,	Same as in Chorea thans described above		Particulars regarding the vilages in these thanas are not available.	The village sites being as a rule on elevated pround, the natural dramage is more or less free during the rains, the washings escaping into adjacent low-lying rice fields.	Particulars regarding the villages of thir thans are not available.	The natural drainage is more or less free	Same as in Chores thans described above.	The villages being situated on elerated ground, the natural drainages is efficient during the rains.	The vileges are situated on elevated ground, and are therefore drained efficiently during the rains.	Particulars regarding the villeges in this thans are not available.	The village sites being on elevated ground, I the natural drainage is good.		The natural drainage is good, and it is supple- mented by drains on the roadsides. Some of these drains are purce, saucer-shaped ones, and age in good order. The extension of the purce surface drain is a necessity.
23	1.56	2.78	200	\$ 5	60.4	1.19	81.	\$	19.	'n	1.82		7.35
	- 58	. 3	19.1	<u> </u>		90.9	6.77	8.08	18-81	12.1	13.75		.9
2	2.60	96.6	18.8	10.40	1771	\$\$ \$\$	\$1.03	81.38	19.22	9.73	11.91		15-65
B	· •	11	*****	 	Ī	85	\$		ä	 !	ä	٠	
33 33 36	108,713	51,080	190'99	888 	14,667	46,993	79,655	162,88	75,899	€64.3 n0	102,515		90099
154618-164170t	Palkot-Raral	Barway - Raral	Birn-Reral	Baltmat - Burat	Baresund Rure?	Manka—Bural	Patan—Rarol	Chattarpur—Baral	Garwa—Rural	Kamkanda—Zural	Hussenabad - Rura!		Chaibassa – Toun

•			RATI PER 1	0 09 DR	RATIO OF DRATHS FROM-	OM-	SAYITABY	SANITARY ESTIMATE OF VILLAGES IN RACE CIRCLE LYDER THE HEADS OF	R THE HEADS OF-
District.	Name of Circle.	Population.	Small-pox.	Fever.	Oholera.	Bowel-com-	Drsinsge.	Water-supply,	Domestic cleaning.
	Chaibassa - Rural	205,663	:	10.51	85 ,	2.	The villages are situated on elerated ground I either adjacent to rice-feels or at he foot of small hills, and their natural drainage is good.	The villages are situated on elerated ground is taken from natural springs, bandhs, rivers, nullass either adjacent to rice-fields or as he foot and kutcha wells. The bandhs receive surface of small hills, and their natural drainage during the rains; washing of cluthes and cattle and skeeping of jute are carried on in them, and nost of them dry up in the hot season, but they as well as nullas are scarcely used for drinking purposes.	The dwelline-houses are erected under large tamarind, peeps, and plum trees, which have been planted for useful purposes, and which form a prominent feature of a Kol village. These-houses are generally small hust on low plinths walled with mud and thatched rooted. Excepting the small entrance door, the sleeping rooms have no other openings for ventilation, and are very dark.
•	Chuokerdhar p n r— Asral,	16,408		11.1	11.	1.80	The villages being situated on high ground surrounded by low cultivated fields, the natural drainage is free.	Is taken from tanks, bandhs, and rivers. The tanks and bandhs are polluited by surface drainage and in various other ways.	The The dwelling-houses are constructed of mud while and that ched roofs, without any means of ventilation. House sweepings and refuse straw are scattered all about the compounds of houses. Defrecation is promiserous
Singoham	Ghatailla - Bural	165,709	80.	15.03	8	1.54	Same as in Chuckerdharpur thans described above.	Same as in Chuckerdharpur thans described above.	Same as in Chuckerdharpur thana ''sacribed above.
	SernikelaKural	77,062	Ş,	11:38	3 . 1	=	The natural drainage appears to be free, the surface water finding its way into the adjacent bandhs and small streams.	is principally obtained from bandle, which are polluted by surface drainage and in various other ways. In the h t weather, however, when mest of the bunds dry up, the people obtain their supply of water from natural springs and hill forrents.	The dwelling-houses are constructed of mud walls and thatched rods, without any means of restliation, and the sleeping rooms are overgrowided at night. House sweppings and retue sitaw are agattered all about the compounds of houses.
•	Kharsowan - Rurul	31,187		9.79	87.	70.4	The natural drainage is good	Is taken from bandhs and a tributary of the river Langai. The quality of the water is not good, as it is polinted in various ways.	The houses are more huts thatched with straw and in, sufficiently ventilated, and their floors are kulcha, and low, but they are not damp owing to the drainage being free. No conservance arabagements exist. The people resort to the riverside and junkee for deforcation. Cowdung and all sorts of refuses are collected in heaps near the dwelling houses.
					•				-
	Purulis-Toers	₹0 8. 0		12.68	2	94 5-	The natural drainage is good. The municipal latenis with their branches discharge into the rivelet to the east and north of the town. The drains are kutcha, but most of them have stone floors. They are kept clean and in efficient working order.	Is chiefly obtained from the Sabebganj lake, the water of which is good and sufficient, but the lake requires depening in some parts. Bethink is carried on in five large tanks, and well water is used for culinary and other demestic par poses. The latter, however, is also drunk to some extent.	Surface-cleaning is well attended to. Sweepings and rubbish are removed to places as apart for the purpose far from habitations. There are four public attrines. The private privice are not under numicipal management. The night-soil is treached away from habitations, Cowdung is met with in the compounds of houses. The tannecies which crist "are in a bad condition. The arrangements for the disposal of the dead are good.
Kashtum	Purulia—Eared	177,487		13.67	.068	ģī.	The villages being stanted on elevated ground. I the natural drainage is more or less free.	Is taken from rivers, bandhs, and jhoqsa. There are many good bandhs in this thans, but, as a rule, their sides are not sufficiently raised, hence the water is polluted during the rains by sarface drainses finding its way into it.	The dwelling-houses are made of mud walls and they are with- roofs. Their plints are very law and they are with- out ventilation. The houses and their as roundings are very dirty owing to refue and condumy being scattered every where. Deducation is promisenous.
•	Jaipur - Barul	89,258	ş	12.92	11.	\$4 \$4	The natural drainage is good owing to the y villages being situated on high ground.	There are many good bandhs which supply water, but as their sides are not well raised, the water is liable to poliution during the rains by surface drainage.	Same as in Purulia, thana described above.
							To the same again		

•	·,	
e as in Purulia thana described above	IDDERDALE, M. D., Deputy Surgeon-General,	Sanitary Commissioner for Bengal.

The 30th May 1888.

. LIDDERDALE, M. D., Deputy Surgeon-General,	ei ,				NGAL,	R BE	MMR. FO	OFFICE OF THE SANY. COMMR. FOR BENGAL,	OFFICE
Same as in Purulia thana described above .	Water-supply in villages, specially those situated on the sides of the Grand Trunk Road, is insufficient. Poople generally obtain water from hill-streams which is remarkably unlessifity.	The natural drainage is good, owing to the elevated position of the villages which are surrounded by low-lying fields.	\$	\$	1970	:	48,013	Topchanchi-Rural	
			1.06	F	10-20	å	50,637	Nirsha-Rural	•
		•	, 3 5	-	18 54	•	\$8,854	Jharia - Bural	
٠.	••		9.	\$	32.41		18,417	Tundi-Beral	
		Same se in Kagnumatipur tusina destrocate above.	.78	\$2	17-87		59,673	Govindpur—Rural	
Geme as in Rachunsthour thans described above	Andrew Section 1		66.	\$	11.03	10.	99,173	Chass-Rural	•
,		•	1.63	ş	16-23	•	39,740	Para-Eural	
•			8	ಕ	18.16		45,788	Gourandi - Baral	
Honess are, as a rule, made of mud walls and thatched roofs. They are without yentilation. In some villages the people sleep at night torether with cattle, graza, and domestic birds. Delecation is promisenous.	Is chieffy taken from bandhs and streams	The natural drainage is good, owing to the living attea being on elevated ground.	<u>\$</u>	ş,	12.23		108,668	Rachunathpur-	
The dwellings are low-floored huts, and are very dirty.	Is taken from rivulets and bandhs, of which there are a good many in this thams.	The natural drainage is good	82	8.	12.03		68,613	Manbazar - Rural	
Same as in Purulis thans described above.	Is taken from bandhs, of which there are many (good ones in this thans.	The natural drainage is good	\$	91.	86.02		133,947	Berabhum - Rural	•
Same as in Purnila thana described above.	Is taken from rivulets and bandhs	The natural drainage is good, owing to the I position of the villages being on high ground.	16.1	- 13	28.11	ė	64,242	Ichagar - Burat	
The houses are made of mud walls and thatched roofs. Ventilation is imperfect. Many pits and excavations filled with all sorts of refuse are to be seen in this thates. Cowdeing is heaped near the dwellings. No conservancy arrangements exist. Defocation is promiseuous.	Is taken from rivulets, bandhs and wells There are very few good wells or bandhs, and it is a pity their sides are not protected from surface drainage.	The villages being situated on high ground, It the natural drainage is more or less free.	6:1	·	14.83		. 38.38	Bagmundi – Rural	
The houses and their surroundings are very unclean owing to the accumulation of covedung and other reluse. People resorting the field for defercation. No conservancy arrangements exist.	Is taken from bandhs, nullas, rivers, and wells. There are good wells in flus thams, the sides of which are well protected from surface drainage.	The natural drainage is good owing to the II village sites being on elevated ground.	78.		13.21	.	68,743	Jaida—Bura!	
The dwelling-houses are for the most part mud-walled but there are a few pucca buildings. The people who have immigrated into the town have privise of their own which are, however, never cleaned. The rest of the poople deforate anywhere and everywhere Cowdung is in some villages stored in heaps for manner in others it is burnt.	There are ten tanks in the town and many wells only two of which, however, are pucca. A small river, called Stalaho, also flows close by on the east and south. Some of the tanks receive surface drainase, but tank wafer is chiefly used for cooking and washing purpose only. The water of the wells is reputed to be of good quality, but, with a few exceptions, it is rendered inpure by promisenous use.	The natural drainage is not good. On the Tweet of the town there is a hill called Kali- tangri, from which during the rains water for which the town, numbates some parts of fit, and collects in the roadside drains from which there is no outlet.	E T		85		186,4	Jhalda-Toers	

Manbham ...

APPENDIX' No. VII.

STATEMENTS EXHIBITING PARTICULARS REGARDING THE VACCINE OPERATIONS OF THE YEAR 1887-88 AND OTHER INFORMATION CONNECTED THEREWITH.

STATEMENT No. I .- Showing particulars of Vaccination in each

			eanine .	cinators season.		MBER OF		s vaccin-		4154	Pai	maby vac	MOTANIX
			ied .	f vac	. 44	CCIMATED		person	·	Total.			Success
Number.	Cincles and Districts.	POPULATION.	Average population mile.	Average number of vaccinators employed throughout the season.	Males.	Females.	Total.	Average number of persons ated by each vaccinator.	Males.	Females.	Total.	Under one year.	One year and under 6.
1	8	. 8	4	5		6		7		8		9	10
1	Calcutta Circle of Superintendence.	433,219	54,152	19	6,016	4,838	10,854	571	5,819	4,591	9,869	4,200	8,610
	Metropolitan Circle of Superin- tendence.			• .	•								
1 2 8 4 5 6 7 8 9	Burdwan Bankurs Birbhum Midnapore Hughi (including Serampore) Howrah St-Pergunnahs Nuddoa Jessore Khulns Murshedabad	1,251,587 989,106 786,580 2,433,862 881,164 529,753 1,351,939 1,645,291 1,921,649 1,059,518 1,141,127	489 879 448 481 742 1,136 683 667 660 515 540	\$9 46 28 86 84 17 59 50 50 57 44	16,197 12,485 10,509 30,777 13,550 7,710 21,144 20,467 27,013 20,878 20,388	15,214 12,169 10,263 28,772 12,747 7,647 19,661 10,090 25,634 20,165 19,583	\$1,351 24,654 20,772 59,549 26,297 15,357 40,805 59,566 52,647 41,043* 30,971	804 536 742 892 773 908 691 791 940 1,109	16,138 13,472 10,509 30,769 13,540, 7,710 21,140 20,467 26,896 20,878 20,375	15,211 12,166 10,263 28,771 12,744 7,647 19,660 19,669 25,618 20,165 19,579	\$1,347 24,688 20,772 59,540 20,284 15,887 40,890 39,566 52,011 41,043 39,984	3,591 1,601 2,264 9,466 3,036 2,261 5,730 5,321 4,986 4,834 6,255	42,750 18,231 14,102 37,343 19,849 11,573 80,389 30,850 40,875 26,978 28,535
	Total	13,891,576	567	496	201 065	190,954	302,812	790	200,992	190,920	391,912	48,845	281,514
12 13	Calcutta (Bovine Vaccination Department). Suburbs of Calcutta	} 251,439	10,932	8 . 12 .	545 6,463	72 5,080	617 11,543	308 . 962	55 4,587	54 4,067	109 8,654	8,140	40 4,338
	Total of Meteopolitan Circles	14,143,015	557	510	208,088	196,106	404,172	792	205,684	195,041	400,675	52,026	285,892
	Darjeeling Circle of Superintendence.			•								•	•
1 2 3 4 5 6 7 8	Dinajpur Maldah Rajslubye	1,501,786 093,624 1,509,753 2,084,644 724,212 1,275,424 573,015 1,833,671	865 867 557 599 484 693 199 373	61 *40 58 57 52 58 52 5 2	16,819 13,019 21,163 19,808 11,164 18,640 19,699 25,008 6,448	15,792 12,236 19,503 18,676 11,010 15,437 9,253 22,709 5,994 638	\$2,611 25,285 40,686 88,484 22,174 34,077 19,952 47,807 12,442 1,444	584 631 701 675 693 587 511 919 2,488 722	16,819 13,019 21,140 19,868 11,164 18,640 16,609 25,005 6,448 806	15,793 12,236 19,493 18,676 11,010 15,437 9,258 22,799 5,994 638	32,011 25,255 40,033 38,464 92,174 84,077 19,952 47,804 12,442 1,444	6,860 8,839 9,084 4,496 4,046 5,136 7,727 10,809 3,137 1,088	25,642 10,58+ 20,841 32,071 17,606 26,602 11,592 35,600
	Total {By paid agency By licensed ditto TOTAL OF DARJEELING CIECLE		419	\$ 394 \$99	6,448 187,126 143,574	5,994 125,344 131,388	12,442 202,470 274,912	2,488 666 689	8,448 137,100 143,548	5,094 125,334 131,328	12,442 263,434 274,870	3,187 57,535 60,672	4,277 194,456 198,783
	TOTAL OF DAMPARATOR CLASSICS							•					
. 1 2 3 4	Banchi Circle of Superintendence. Manbhum Singbhum Huzaribagh Lohardugga Political States of Jashpur, Gangpur, Korea, Sırguja, Udaipur, Changbanka.	1,089,436	253 128 155 132 88	82 11 63 54 43	15,046 6,724 14,031 22,096 16,597	15,643 6,161 14,080 20,760 15,002	28,689 12,885 28,711 42,846 81,659	896 1,171 455 798 786	• 15,046 6,724 14,623 22,086 16,597	13,643 6,161 14,080 20,760 15,062	28,689 12,885 28,703 42,646 31,659	6,696 3,156 7,978 19,612 8,003	20,527 7,593 19,656 31,733 20,031
	Total of Ranchi Circle		154	203	75,084	69,706	144,790	718	75,076	69,706	144,788	45,445	89,580
	Sonthal Pergunnahs Circle of Superintendence.				,		'	,					
1 2 3	Sonthal Pergunnahs	1.908,033	283 447 482	78 54 127	\$1,509 17,800 16,922	20,659 16,303 15,871	42,168 34,103 32,793	540 620 258	21,431 17,798 16,921	• 20,617 16,302 15,671	42,048 84,100 82,792	7,948 5,978 2,260	32,196 28,79 24
•	TOTAL OF SONTHAL PERGUNNARIA CIRCLE	5,384,716	391	259	56,231	52,833	109,064	421	56,150	52,790	108,940	14,184	90,913
	Eastern Bengal Circle of Superin- tendence.										1.		الميد ا
1 2 3	Faridpur	1,600,521		120 84 47	36,498 17,866 7,288 During	23,188 17,123 6,531	69,686 34,489 13,819	580 410 294	+36,498 17,364 7,258	38,188 17,123 6,531	69,686 84,487 13,819	6,238 3,411 1,528	22,28 10,375
4	(By Hoenmed ducto	Ι .	725	83	186 27,726	116 26,586	282 54,512	654	136 27,726	116 26,586	252 54,812	24 5,023	191 39,876
5 6	Tipperuh Backergunj {Ry paid agency By licensed ditto	1.881.764	601 517	70 97 14	27,859 152,900 11,675	26,569 136,078 10,855	54,408 290,973 22,580	777 2,909 1,408	27,839 152,900 11,675	96,569 188,078 10,855	54,408 290,978	7,426 15,819 1,062	39,056 123,651 9,619
	TOTAL {By paid agency By licensed ditto	10,759,978	578	{ 97 418	153,086 126,392	188,189 120,852	291,225 240,244	3,002 596	153,036 128,390	138,189 120,852	991,225 249,242	15,848 24,688	128,842 108,788
	TOTAL OF EASTERN BENGAL CIECLE	٠ ر		C 515	281,498	259,041	540,469	1,049	251,426	259,041	540,467	40,531	292,680

***************************************			1	RB-VACC	INAT	MOL	•	•	OF SUC	NTAGE Bespul	Relic	VACCINAT		(BER	raccinated	Average a Number of I Successfull Rated Duri	BRSONS VACCI- NG THE	DUBIN	DRATU ALL-PO G THE
ful.			Total.	•		8	uccensful	l.		ers.	Total	number g ra	ceinat	ed of—	E .	PREVIOUS YBARS	BIVE	PREVIOUS YEAR	rs.
Above é years.	TOTAL OF ALL	Males.	Females.	Total.	Under 1 year.	1 year and under 6.	Above 6 years.	TOTAL OF ALL	Primary.	Re-vaccination.	Hindus.	Mahomedans.	Ohristians.	Office races.	Persons successfully per 1,000 of population.	Number.	Ratio per 1,600 of population,	Number.	Ratio per 1,000 of population.
11	12		13		14	15	16	17	18	19	20	21	22	23	24	. 25	26	27	28
448	8,259	798	247	1,045	ļ. 		132	132	98.60	14.84	7,510	2,680	632	63	18-13	10,047	23:10	147	*83
4,941 4,756 4,364 12,645 3,374 1,514 4,562 3,242 6,571 9,851 5,089	\$1,822 24,588 20,780 68,354 26,259 15,347 40,681 39,413 52,482 40,966 39,879	1 13 8 * 10 4 17	3 8 8 1 8 •1 19 4	4 16 9 13 		1 4	3 9 9	11 13	99'96 99'79 99'79 99'79 99'90 99'83 99'83 99'77 99'82 99'85	84°61 80°00 86°11 17°64	27,048; 23,592; 16,112; 60,911; 21,474; 12,986; 25,440; 14,906; 20,807; 17,108; 17,139	5,931 1,062 5,510 2,908 4,828 1,962 15,200 34,454 31,826 23,1920 22,831	3 40 9 158 206 14 20	875 1,147	25.02 24.80 24.38 24.38 27.81 28.97 21.00 25.52 27.29 38.66 34.94			91 25 179 22 14 24 27 27	**************************************
60,612	390,971	66	34	100	-	8	35	40	89.80	40.00	252,513	137,517	453	1,529	28:14	359,181	25.85	577	.04
1 614	82 8,092	490 1,876	1,018	508 2,889	 	1 18	986	- 156 954	94·25 97·51	40°81 44°89	137 7,925	174 3,434	298 184	 	* 94 85* 9 7	612	2·43 44·46	} 78	•08
61,227	399,145	2,432	1,065	8,497	-	24	1,126	1,150	99.75	43.02	260,575	141,125	985	1,537	28:30	870,974	26.55	636	*04
1,901 351 1,691 1,878 619 2,139 558 584 2,538 46	32,003 25,254 40,556 38,445 22,170 35,937 19,877 47,793 11,652 1,443	28	10	38		"i	28	29	90°29 99°99 99'98 99'98 90'98 90'95 99'08, 99'94	90.63	15,121 12,131 6,784 12,771 3,940 7,305 11,579 27,260 12,173 1,211	16,530 15,030 33,425 20,223 18,234 20,772 6,249 18,883 5	31 1 2 11 3	929 93 457 490 2,129 1,675 263 171	21°61 36°42 30°98 18 44 30°61 26°40 34°65 26°06 80°60 79°26		1	27 15 18 5 6 5 4 24 3	.01 .008 .008 .008 .008 .008 .008
4,238 10,087	11,652 262,078	26	10	36	<u>:::</u>	ï	28	59	99.96	82.88	12,173 98,085	158,404	11 37	258 5,944	80°80 25°64	25,997 227,102	2.240 22.40		*****
14,325	278,780	26	10	· 36		1	28	29	30.00	82.86	110,258	158,409	48	6,197	26.00	253,189	24.98	110	.01
025 1,535 976 912 2,035	27,848 12,284 28,610 42,247 30,669	8 8	****** ****** ******	8 			4	4	97*08 95*49 99*71 98 89 97*05	50.00	27,622 12,745 26,388 40,661 31,550	1,040 45 2,307 1,107 68	•27 97 16 1,078 41		26'56 22'09 26'26 26'80 56'17	By paid 29,897 By licensed 104,544	6-21 21-70	16 80 211 140 Not under trati	on.
												•				184,442	27'91	[""	*08
1,831 1,801 550	41,97 3 33,973 32,732	78 2 1	42 1	120 3 1	:::	6	109	115 1	99·82 99·82 99·82	95'83	16,720 30,906 29,950	3,400 2,897 2,287	121 1 19	21,867 709 537	27:19 17:85 17:37	By paid	******	108 321 350	*16 *18
3,589	108,678	81	43	124	=	8.	110	116	99*77	98'54	77,666	8,144	161	23,113	20:39	57,005 By licensed 66,990	19.55	780	. 14
18,776 8,643 1,902	69,608 34,819 18,805	2	******	2	::: :::	 	2 	2 2	99°95 99:82 90°89	100	17,426 15,246 5,465	50,570 18,871 8,839	* 5 58 15	1,685 314	23:26 21:44 17:83	123,996	23-24	281 05 283	*09 - *04 *30
9,189 7,919 151,477 11,848	251 54,039 54,403 290,947 22,529	**************************************	•	******	•:	:::	*****	******	99°00 94°58 99°99 99°99 99°94	******* ****** ****** ******	131 19,087 14,480 467,728 10,981	120 - 33,796 - 39,920 - 220,159 - 11,485	008 6 9 33	221 3,077 31	12 26.72 36.55 154.61 12.30	*******	•••••	} 151 102 } 76	*07 *06 *04
151,518 55,276	291,198 248,752	2		•····g	:::	:::	2	2	99.66 96.99	100	67,859 83,465	220,279 162,981	10 727	3,077 2,251	27:06 23:11	149,700 182,380	18.91 16.95	*****	*****
206,789	539,950	2		2	٠	ļ	2	2	89.83	100	161,144	873,260	787	5,828	50.18	332,080	36 80	917	*08

STATEMENT No. I .- Showing particulars of Vaccination in each

To state of	particular and the particular an	, <u>, , , , , , , , , , , , , , , , , , </u>						بعود					
			per square	vaccinators ut the sesson.	TOTAL NU	MBER OF	PÉRSONS	of persons vac- vaccinator.		Total.	PRIM	ABY VACCI	Success.
Number.	CIRCLES AND DISTRICTS.	Populatios.	Ayerage population mile.	Average number of vaccinators employed throughout the season.	Males.	Femiles.	Total, ·	Average number of cinated by each vac	Males.	Persales.	Total,	Under 1 year.	l year and under 6.
1	8	8	4	5 .		6		. 7.		8		9	10
1 2 8	Orissa Circle of Superintendence. Cuttack {By paid agency By licensed ditto By licensed ditto By licensed ditto By licensed ditto By licensed ditto By licensed ditto By licensed ditto By licensed By licensed By licensed By licensed By licensed agency Berhamba }	1,724,890 864,195 8 72,574	477 849 189	3 60 25 12 7	687 12,733 25,207 1,046 6,645	444 11,452 20,589 977 5,565	1,181 24,165 48,656 2,023 12,210 1,844	377 402 1,746 168 1,744 461	687 12,733 * 23,287 , 1,946 6,627	444 11,432 20,389 977 5,519	1,131 34,165 43,656 2,033 12,176 1,844	43 1,210 1,520 57 908 70	928 20,517 36,683 1,633 9,044
	Total Ry paid agency By licensed ditto Total OF ORISSA CIECLE	2,961,665	888	\{\begin{aligned} align	30,599 14,766 45,865	26,398 13,266 39,664	56,997 28,032 85,029	1,628 368 766	30,581 14,768 45,347	26,382 13,266 39,648	56,963 28,032 84,995	2,471 1,837 3,908	46,955 28,146 70,101
1 2 3	Behar Circle of Superintendences Patna {By paid agency } By licefised ditto } Shahabad By ditto ditto Gya By paid ditto	1,524,038 1,845,827 1,300,948	741 424 564	\$8 \$5 02	During recess { 214	206 10,158 10,206 33,706	420 20,685 21,704 27,695	552 620 446	21 4 10,427 11,497 13,961	206* *10,165 10,206 13,678	420 20,583 21,703 27,639	44 1,608 2,469 2,296	311 17,417 15,006 21,671
	Total {By paid ditto by licensed ditto } Total of Brear Circle}	4,789,813	586	$\left\{ \begin{array}{c} 62\\ 78\\ \hline 185 \end{array} \right.$	14,208 \$1,925 \$6,128	13,912 20,564 34,276	28,115 42,289 70,404	553 579 521	14,175 21,923 86,099	18,884 20,361 34,245	28,059 42,285 70,844	2,840 4,070 6,410	21,993 32,428 54,415
	GRAND TOTAL OF By licensed ditto ALL CIRCLES	53,829,256	305	\[\begin{align*} \begin{align*} & \text{232} \\ & \text{1,919} \\ & \text{3,151} \end{align*}	217,810 634,582 851,892	194,485 503,819 787,802	411,793 1,227,901 1,639,694	1,775 .639 762	214,100 634,398 848,498	193,161 593,229 786,890	407,261 1,227,427 1,634,888	81,172 196,104 227,276	205,060 880,769 1,085,829

Office of the Sany. Commr. for Bengal,

The 10th May 1888.

STATEMENT No. II—Showing the cost of vaccination in each

							Be	T/BLI	BREE	D.							Expr
	CIRCLES.	Superifitendents.	Deputy Saperintend- ents.	Native Superintend.	Inspectors.	Total.	Head-vaccinator	First class vaccinators.	Total.	Second and third class vaccinators.	Apprentices.	Total,	Clerks.	Menial servants.	Total.	Pay of establishment.	Travelling allowances.
1	2 .	8	4	5	* 6	7	8	•	10	11	12	18	14	15	16	. 17	19
	Calcutta	1 1 1 1 1 1 1 1 1 1 8	1 4	1 		3 44 1 1 46 15 34 11 10 6 8	3· 2 2 2 1 3 6 3 5 5	5 5 5 5 6 9 13	8 7 7 6 9 12 12 18 72	14 	 28 28 10	14 	1 1 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1	1 6 7 4 17 4 8 8 2 2 8 9 1	2 9 8 4 21 3 4 8 5 8 5 4	Rs. A. P. 6,188 10 3 81,802 0 0 1,676 13 5 2,571 9 4 36,850 6 9 14,691 15 0 10,310 16 1 5,865 25 0 15,850 11 6 6,166 1 7 10,791 14 1 1,06,666 9 3	Rs. A. P. 600 0, 0 11,117 4 2 263 3 526 7 11,908 15 8 4,744 10 6 1,415 19 6 3,094 4 4 5,222 5 1,500 0 0 2,878 0 6 81,961 18 7
	Municipalities		12	·			· •==	.:ند	<u></u>	228 884	-:-	223·		83		19,487 5 7	31,961 13

NOTE.—" The Government staff of vaccinators was entertained for three months only during the recess (i.e.) from April 1887 to June 1887.

Office of the Sany. Commr. for Bengal,

The 10th May 1888.

Oircle of Superintendence during the year 1887-88—concluded.

**********			R	B-VACC	INA:	LION				NTAGE		ON OF TH		BER	inated	AVERAGE NUMBER OF	PERSONS	AVERAGE BSR OF D FROM SMA	BATHO
ul.			Total.			8	uccessful		OF SUCC		Total m	mper yao	inated	ot-	y vade	SUCCESSFUL MATED DUR PREVIOUS FI	ING THE	DURING PREVIOUS YNAR	THE
Above 6 years.	TOTAL OF ALL AGES.	Kales.	Pemalca,	Total.	Under 1 year.	1 year and under 6.	Above 6 years.	TOTAL OF ALL AGES.	Primary.	Re-vaccination.	Rindus.	Mahomedans.	Christians.	Other races.	Persons successfully vaccinated per 1,000 of population.	Kumber,	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
11	12		18		14	15	16	17	18	19	. 20	21	22	23	24	25	28	27	28
1,221 3,440 201 1,226	1,040 22,948 41,983 1,846 11,178	18	16	34		:::::::::::::::::::::::::::::::::::::::	 5	5	91.95 94.98 96.39 91.25 91.80 78.14	14-70	1,068 23,461 42,830 1,951 10,984 1,399	45 616 498 28	20 36 239 20	32 89 24 1,260	60 13:30 48:58 2:13		····· }	590 253 Not unde tration.	'34 '29 or rogis
4,775 1,742	54,201 26,225	18	16	84	-		5	5	95°38 93°55	14'70	54,830 26,831	559 644	259 56	1,349 601	18:30	47,936 3,223	16.18		
6,517	80,428	18	16	34		<u></u>	8	5	94:77	14.70	81,661	1,203	315	1,850	27.16	51,159	17-27	844	.58
3 1,263 3,706 8,030	367 20,288 21,174 26,997	 1 28	3 28	 8 1 56	1	 2 1 3	1 9	\ 8 1 12	87'38 98'74 98'36 97'67	100 100 21.42	369 18,341 20,458 24,114	50 2,076 1,227 3,547	 	168 19 30	-24 18:31 11:47 12:41	6	}	486 174 38	.31 .05 .05
8,032 4,969	27,364 41,462	· 28	28 3	56		3 8	9	12 4	98'42 98'54	21.43 100	24,483 38,799	3,597 3,803	в	30 187	5.77 8.74	30,221 18,984	6·37 2·95		
8,001	68,826	29	81	60		6	10	16	98-50	26.66	63,282	6,900	5	217	14.52	44,206	9:×2	693	'14
164,616 142,951	400,848 1,219,824	8,210 184	1,322 90	4,532 274		22 15	1,287 180	1,259 195	98.71 69.76	34°82 75°64	174,917 706,148	230,678 475,500	1,399 2,678	4,799 43,525	7:50 22:87	362,599 957,497	4°80 17°95		
307,567	1,620,672	3,894	• 1,412	4,806	-	87	1,417	1,454	99.83	87:38	881,060	706,238	4,072	48,324	30.41	1,320,097	24.75	4,731	.08

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

Circle of Superintendence during the year 1887-88.

r	OITURE.				PA	ID TROM-			opera-	Suc.
	Contingencies.	Тотал совп.	Imperial Fund.	· Provincial Fund,	Local Fund.	Municipalities.	Native States.	TOTAL.	Number of successful o	Average cost of each ceastal case.
	19	20	21 .	22	23	24	25	26	27	28
	Ra. A. P.	Rs. A. P.	Rs. A. P.	Ra. A. P.	Rs. A. F.	Rs. A. P.	Rs. A. P.	R. A. P.		Ra. A. P.
١, ١	1,789 0 6	6,527 10 9				8,527 10 9		8,527 10 9	8,391	108
	460 10 9° 1,832 10 9 1,078 9 0	43,379 15 8 3,272 11 9 4,971 0 6		43,379 15 3 3,272 11 9 1,842 9 3	******	3,128 7 3		43,379 15 8 3,272 11 9 4,971 0 6	3,91,011 238 9,046	0 1 9 0 14 2
1	2,866 5 6	51,623 11 6		48,495 4 3		3,128 7 3		51,623 11 6	4,00,295	0 2 0
	630 0 0 150 0 0 260 9 6 243 12 6 215 0 0 65 15 9	20,066 9 6 11,976 9 7 9,820 12 10 21,356 18 0 7,881 4 7	****** ****** ****** *****	20,086 9 6 11,188 1 7 0,820 12:10 21,356 13 0 7,437 6 10 13,755 13 10	000000 000000 000000 000000	**************************************	708 8 0 	20,066 9 6 11,876 9 7 9,820 12 10 21,356 13 0 7,881 1 7 13,735 13 10	2,73,759 1,41,662 1,08,794 5,39,952 80,431 68,842	0 1 2 0 1 4 0 1 5 0 0 7 0 1 6
	6,280 11 9	1,44,509 2 7	*	1,32,100 13 10	,	11,656 2 0	1,152 2 9	1,44,909 2 7	16,22,126	0 1 5
		12,487 5 7	•		120 6 0	1,998 14 7	518 7 0	12,437 5 7	78,212	0 2 9
	6,280 11 9	1,57,846 8 2	******	1,82,100 13 10	120 0 4	23,655 0 7	1,470 9 9	1,57,346 8 2	16,95,348	0 1 6

The staff of Government vaccinators has been abolished by Government order No. 189T.M., dated 21st June 1887.

R. LIDDERDALE, M.D.,

App. VII.]

STATEMENT No. III.—Showing particulars of Vaccination performed by Vaccinators attached

	inici di	유혈	To	TAL NU	CBER OF	Vacci.	persons vaccina-			PRIMA	T VACC	INAT101	r. '	
	he dist	vaccinators at- municipalities, &c., in the dis- the season.			CLEATED.	persons	each vac		Total.			Succ	essful.	
Districts.	Number of municipalities, dispensaries, &c., in the district to which vaccinators were attached.	Number of vaccin tached to the musi displanation, &c., trict during the see	Males.	Females.	Total.	Total number of pe nated in 1896-87,	Average number vaccinated by eactor.	Males.	Females.	Total.	Under one year.	One and under six years.	Above six years.	Total of all ages.
Burdwan Bankura Biribum Midnapore Hughli and Sorampore Hughli and Sorampore Howrah 24-Porgunnalis Nuddea Jessore Khulna Murshidabad Dinajpur Rajshahye Rangpur Bogra Puthas Darjiling Julpaiguri Dacca Faridpur Backergunj Mymensing Tipperah Chittagong Noakhali Patna Gya Mozufferpore Durbhunga Sarun Chumparun Mongbyr Bhagulpors Purneah Nonthal Pergunnahs Cuttaok Puri Balasore Hazaribagh Nonthal Pergunnahs Cuttaok Puri Balasore Hazaribagh Lohardugga Singbhum	631689794341938934911911	53169509336128422143492229487817774226121211	1,624 867 65 1,851 1,878 1,878 1,879 5,490 1,076 808 401 1,016 1,016 1,016 1,450 608 2,944 608 3,168 1,268 1	1.201 759 86 1,078 1,348 1.376 2,799 900 4/03 310 1,374 248 407 407 379 177 373 721 656 637 826 637 826 637 826 1,113 666 2,064 1,407 677 673 686 2,064 1,413 686 2,564 1,413 686 2,564 1,413 686 2,564 1,413 686 2,564 1,413 686 2,564 1,413 686 2,564 1,413 686 1,413 68	2,825 1,636 1,636 1,636 1,936 2,964 6,279 1,976 661 1,976 661 1,976 661 1,979 861 1,737 200 2,566 1,174 1,239 662 1,230 662	3,206 1,567 1,688 1,784 6,696 6,520 2,551 3,152 332 761 3,152 2,704 1,492 347 11,492 349 11,492 11,4	565 542 1384 384 384 384 287 384 287 388 217 550 122 550 122 550 122 560 201 229 154 050 221 489 391 391 391 391 391 391 391 391 391 39	1,594 830 65 1,219 1,854 1,051 1,753 553 563 563 563 563 206 439 1,101 1,410 614 684 732 2,929 81,124 3,608 627 397 397 31,124 484 586 1,314 384 488 488 488	1,199 739 68 1,054 1,357 1,356 2,760 801 1,308 459 1,308 459 1,308 467 631 3245 631 325 631 325 631 325 1,473 437 437 437 437 437 632 261 1,121 2,377 632 261 1,387 632 261 1,387 638 266 1,687 2,552 2,473 3,377 638 640 1,687 2,552 2,473 3,377 638 640 1,687 2,552 2,473 3,377 638 640 1,687 2,552 2,473 3,377 638 640 1,687 2,552 2,611 3,877 638 640 1,687 2,552 2,611 3,877 638 640 1,687 658 668 678 678 678 678 678 678 678 678 67	3,793 1,569 131 2,973 3,191 2,973 3,191 2,909 6,165 1,949 631 3,091 1,020 837 377 812 1,736 812 1,736 1,268 4,972 1,343 1,268 4,972 1,343 1,268 4,972 1,343 1,268 4,972 1,343 1,268 4,972 1,343 1,268 4,972 1,343 1,268 688 584 4,985 1,274 4,985 1,274 889 899 875	634 152 338 401 1,106 1,106 63 444 251 51 377 107 62 66 66 65 1,25 107 80 17 82 17 82 17 82 17 82 17 82 17 82 17 82 17 83 17 84 85 11 11 11 11 11 11 11 11 11 11 11 11 11	1,529 1,145 1,458 1,942 1,942 1,942 1,942 1,942 1,942 1,942 1,942 1,942 1,942 1,943 1,460 171 787 806 405 77 806 405 1,460 171 787 806 405 1,460 171 787 806 405 1,701 1,685 2,701 1,685 2,701 1,685 3,360 393 363 363 37,484 1,488 2,180 383 384 384 384 384 385 384 385 385 385 385 385 385 385 385 385 385	568 248 141 669 167 1,156 441 271 88 88 264 153 71 397 510 666 666 446 440 170 471 49 127 137 161 49 177 234 490 127 137 157 158	9.731 1,545 1,118 3,013 2,877 6,080 1,885 2,910 2,910 986 708 360 773 1,013 2,910 2,586 1,165 1,165 1,165 1,671 1,671 1,671 1,671 1,671 1,413 4,886 3,030 4,886 3,030 1,174 4,970 741 4,970 741 4,970 741 4,970 741 4,970 741 8,183 1,183 1,184 1,185 1,186
Manbhum Grand Total	168	223	125 48,770	35,191	78,961	88,101	92 854	124	149 84,710	273 77,409	12,508	215 48,786	11,038	72,282

to Municipalities, Dispensaries, &c., in the Province of Bengal during the year 1887-88.

To To To To To To To To		R	-VACCINAT	TION.							PERCE	TAGE OF	
	Total.			Succ	essful.		NUM	DER VACO	INATED &	#O#6	SUCCESS	UL CASES.	1
S7	Males. Females.	Total.	Under 1 year,	and under	Above 6 years.	8		Mahomedaus.	Christians.	Other races.	Primary.	Re-vaccination.	Remarks.
1 2 3 3 3 240 33 3 97.48 100	37	57 58 35 45 114 8 197 142 8 8 2 2 3 6 142 8 8 2 2 3 16 48 40 7 1 8 279	1	2 2 14 10 7 7	16	18 11 19 53 14 77 181 181 184 114 8 2 2 183 183 19 19 19 19 19 19 19 19 19 19 19 19 19	1,665 3,905 2,837 2,236 4,834 657 325 2,129 241 674 670 1,107 1,107 1,107 1,107 1,107 1,217 1,07 1,217 1,07 1,217 1,07 1,217 1,07 1,217 1,07 1,217 1,07 1,217 1,07 1,08 1,287 2,640 1,581 2,076 1,451 4,281 1,455 1,455	55 764 197 3878 3836 1885 1885 1886 1886 1886 1886 1886 188	8 8 8 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	371	96*47 92*56 94*46 96*21 96*21 98*57 98*84 100* 98*69 98*69 98*69 98*51 96*92 98*71 9	31.87 73.21 31.43 30.47.82 41.17 87.50 91.87 76.93 47.93 80.98 100.100.100.35 50.23.53 79.31	

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,
Sanitary Commissioner for Bengal.

CUMPARATIVE STATEMENT NO. IV-Showing the Number of Persons Primarily Vaccinated and the Number of those Persons who were Successfully Vaccinated in each

of the undermentioned Official Years.

	Number successfully vaccinated.	1887-88.	389,670	68,913	•	43,278	3,369	1,187,724	1,692,954
	Total number.	1887	395,065	73,483	i	62,679	3,927	1,194,124	1,712,297
	Mumber saccessfully betainces	1896-87.	579,007	90,160	· !	28,427	28.483	1,086,090	1,586,167
	Total number.	188	384.671	119'96		27,263	8,962	1,090,020	1,602,527
	Sumber successfully vaccinated.	8 6	245,458	90,257	:	24,514	986,2	981,844	1,845,267
	Total number.	1885-86.	251,138	96,846		25,083	3,436	985,180	1,361,781
	Number successfully vaccinated.	1884-85.	876,941	95,389	!	30,676	3,521	950,578	1,457,108
	• .redmmn lastoT	381	383,104	101,318	!	31,637	4,020	955,423	1,475,502
ATED.	Number successfully vaccimited,	1883-84.	873,231	3	!	81,967	\$,684	856,717	1,824,863
T VACCIB	Total number.	186	378,597	63,518	1	85,263	6,591	866, 650	1,350,519
PRESORS PRIMARILY VACCINATED.	Wamber successfully .	1852-88.	672,185	58,250	:	13,994	9,560	466,934	1,235,048 1,350,519
Рввод	Total mumber.	381	680,1.23	196,19	i	19,136	11,529	474,207	1,246,646
	Number successfully vaccinated.	1881-52.	827,212	59,403	\$20	1,112	5.53	425,490	1,315,199
	Total number.	188	431,465	62,588	365	1,374	6,027	437,619	1,339,449
	Number successfully vaccinisted.	1891-81.	888,2%	4 9,62.	9	3,881	2,846	414,179	1,359,267
	Total mumber.	381	898,811	53,63	526	4,462	8,590	4 22,763	1,385,763
	Number successfully vaccinated.	1879-80.	604,111	54,847	1,426	8,158	7,805	1,008,651	1,681,996
	Total number.	187	S18'9:9	65,395	1,709	3,900	8,956	1,021,130	1,717,453
	Wimber successfully vaccinated,	1878-79.	493,020	67,683	1,053	2,83	9,292	665,453	1,239,435 1,717,433
	Total number.	187	506,487	78,146	1,854	8,329	10,476	683,009	1,276,900
,	Ë		:	ì	:	:	:		:
	Botanisti.		Government	Municipal	Local Funds	Native States	Dispensearies •	Work done by inoculators.	Total

OFFICE OF THE SANY. COMMR. FOR BENGAL, \\

The 10th May 1888.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

A.

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanas in which Vaccinations were performed.

Burdwan	1NG	
Burdwan	November 1887. December 1887. January 1888. Pebruary 1888.	Total.
Burdwan	1	1 4
Bankura		
Burdwan		.11
Burdwan		: ::
Burdwan		: ::
Repair	4	11
Rationary 10,000 1 1 1 1 1 1 1 1 1		.
Montewer Capas	1 .	:: · · · ₁
Purbashali		: ::
Bankura		: ::
Bankura		1 13
Bankura		
Bankura Somanuhii	1 1 1 1 1	1 1
Rotation		.
Birbhum		.
Birbhum Sari		.
Birbhum Birbhum Bapur 126,566		1 1
Birbhum		_ .
Birbhum		.
Moureswar 183,8597		.
Total 789,580	1 1 1 1	
Amalian Amalia		`- -
Mashandpur 10,500 2 1 1 1 1 1 1 1 1 1		- -
Chandrakona 68,510		
Midnapore 138,788	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Midnapore Copinalabpur 139,498	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Midnapore 139,928 159,928 159,928 159,928 159,928 159,928 159,928 159,928 159,929 15		
Midnapore Salumi		.
Midnapore		2 -
Debra 201.714 1		:: :
Panchkurs	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1::1:
Nandigram		2
Rightunathpur 62,124	1 1 1 1	
Rhajar		" .
Bhagwanpur	. .	
Total		1 '0
Hughli 15,488	- - 	10 0
Hughli		
Balagarh		1 -1 -
Hughli	.	
Goghat		= ::
Harlpal 84,987		
Contantion		
Total	. -	
Tuberis		2 -00
Tuberia		•
Ampta		:: ::
		122 22
Total 529,753		

App. VII.]

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanas in which Vaccinations were performed—continued.

		,	DEATHS DUBING-													
Districts.	THAMAS IN WHICH VACCINATIONS WELL PREFORMED.	FOPULA- TION.	April 1887.	May 1887.	June 1867.	July 1887.	August 1887.	September 1887.	October 1587.	November 1887.	December 1887.	January 1889.	February 1858.	March 1898.	TOTAL.	RATIO OF DEATHS PER 1,000 OF POPULATION.
24-Pergunnaha-	Barrackpore Baruset Hossainabad Baduria Barripore Joynagore Diamond Harbour Tallyganj Atchipur Bistopur Sonarpur Bhangor Phangor Naihati Haros Matlah Kulpi	14,082 62,518 62,107 72,085 68,452 68,455 62,838 47,733 82,536 77,717 78,855 78,516 75,429 55,429 55,429 55,429 47,518 90,319 43,455		2					1							"01 """ "04 """ """ """ """ """ """ """ """ """ ""
	Debipur Hankipur Mathurapur	107,275 50,453 (1,851,959	<u>:::</u> <u>-:-</u>			-:: -:-	:::	<u>::</u>	1		<u>1</u>	==	<u> </u>		"1 "-	-000
Nuddes	Kishnaghur Kushtia Kunarkhali Ranaghat Chagda Jaguli Chuadanga Mehorpore Hanskhali Kishenganj Chupra Nakashipara Katipanj Tohatta Karimpur Gangai Daulatpur Bhaluka Blindulia Alamdanga Damurhuda Kalupol Jibunnagar Santipore	130,713 41,920 68,184 89,947 63,014 30,396 40,120 24,177	:::		2				1 	3						**************************************
Jessore	Jessore Ke-hubpore Jhenada Kotchandpore Magura Narail Baghirpara Monirampore Godkhali Kalicanj Shnikhis Muhamadpore Kala Lubagarra Harinskanda and Salkopa Moheshpur Bongong Saraha Ginuripotha Ginuripotha	85,460 102,627 84 4 67 151, 42 63,660 155,660 156,660 157,430 80,202 50,463 83,677 72,947 103,863 180,170 112,137 59,668 79,644														
Murshidahad	Sujaganj Gorabazar Barwan Haratpur Shahanagar Assanpur Haghunathganj Dewanserai Goas Jelmghi Daulatbazar Hariharpara Nowada Gokaran Kalianganj Sagardighi Hagwangola Shamahorganj Sati Mirzapur Kangia Kan	12,635 67,912 108,025 11,177 57,298 55,038 78,422 108,508 30,568 67,135 47,559 42,446 37,759 67,538 60,536 45,546 45,546 45,546 45,546		4												**************************************

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanas in which Vaccinations were performed—continued.

				DEATHS DURING—													
Districts	s .	THANAS IN WHICH VACCINATIONS WERE PREFORMED.	POPU- LATION.	April 1887.	May 1887.	June 1887.	July 1887.	Augrikt 1887.	September 1887.	October 1887.	November 1887.	December 1887.	January 1888.	February 1888.	March 1888.	TOTAL.	RATIO OF DRATES PER
Khulne	{	Khulna Dunuria Baitaghata Paikgaicha Bagirhat Rampai Moreilganj Satkhira Kalarua Magura Asasuni Kaliganj Mollahat Total	121,213 109,020 37,501 10',478 137,818 49,827 62,670 87,876 61,398 48,212 144,616 50,478	"1 ": ": ": ": ":				::					 		2 	g	.0
		TOTAL	13,891,576		$\frac{11}{1}$	6		1		$\frac{9}{2}$	7	- 6	3	3	12	61	-
·		Suburbs of Calcutta TOTAL OF METROPOLITAN CIRCLES.	251,439	2	12	-:- 8	1	1	":-	11	10		-	3	18	75	-
Dinajpur	:	Rajarampore or Kotwali Birganj Thakurgaon Ranisankail Pirganj Hemtabad Nawabganj Kaliganj Bansihari Patntolla Mohadebpur Porsha Patiram Gungarampur Chintamon Parbatipur Total	199,826 189,891 290,387 75,102 95,880 85,287 61,637 94,843 81,877 69,238 67,265 48,586 70,661 74,491 52,058 66,708		1 1 4		 5 		:: :: :: :: :: :: :: :: :: :: :: :: ::					 		1 2	9
Malduh	{	English Bazar Maldah	72,615 45,200 64,317 80,024 103,025 52,810 115,692 102,162 60,453		 											1	
Rajshahyo		Natiore Lalpur Hughmara Nowgaon Manda Putia Singra Heauleah Burigrain Godagari Panchpur Tanore Total	144,568 84,962 121,571 85,840 103,308 121,238 112,698 121,558 43,799 79,481 85,609	2 		1							2			3 ₂	
Rungpur	•••	Kaligauj Ulipur Sadulapur Sadulapur Ibarwani Maiganj Maiganj Maiganj Jaldhaka Dimla Barabari Nageshwari Mithapukhur Pirranj Sundarganj Sundarganj Kumarganj Bhowaniganj Gaibund	67,809		1								3 	 15 3	13 13 13 	-: <u>4</u>	
Bogra		Bogra Shariakandi Sherpur Shibganj Panchvibi Badagachi Adamdighi Khetlal	1,08,226 43,496 59,080 66,724 30,374 94,534										1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		7.		

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanks in which Vaccinations were performed—continued.

												DRAT	HS DU	BING-	-					
	DISTRICTS.		THANAS IN WHICH VACCIMATIONS WERE PYEFORMED.			Privila-	April 1887.	May 1887.	June 1887.	July 1887.	August 1887.	September 1887.	October 1887.	November 1887.	December 1887.	January 1889.	February 1888.	March 1868.	Toral	
	Pubna		Pubna Serajganj Dulsi Chatmohar Mathura Shazadpore Ulapara Raiganj	Total	*** *** *** *** ***	174,381 198,148 186,363 183,467 102,486 216,494 171,711 92,374														
	Darjiling	{	Darjiling Phansidewa Kurseong Kalimpong	Total	***	45,300 63,241 22,967 12,683	1 17 	10	4 	₂						:: ::; 1			2 1 33 1 37	1 -
	Julpaiguri		Silligoree Boda Julpaiguri Patgram Mynaguri Alipur Kairanti Salbari	 Total	000 000 000 000 000 000	80,178 178,643 67,471 64,636 66,451 32,486 32,486 51,697		 										 6 6	 6	-
	Purneah		Purneah Kusba Amour Dhundaha Gondwara Arrarca Mattari Raniganj Kissenganj Bahadurganj Kaliaganj Kaliaganj Kaliaganj Kaliaganj Madwa Halarampur Manihari	••• ••• ••• •••	000 100 100 100 100 100 100 100 100 100	138,704 124,849 119,391 123,945 200,012 94,115 107,552 158,100 196,142 277,059 134,275 116,031 54,456	2	2	1 1 8 	**************************************				3 	1 1	5 		 1 1	3 1 3 5 1 10 5 1	
			Total Circi	OF DARJ		10,140,620	39	26	11	16		2	1	3	3	11	21	3	163	
	Mymensing		Jamalpur Kishorganj Atia Katwali Phulpur Ishwarganj Gaffargaon Sherpur Dowanganj Bazidpur Nikli Pingna Gopalporo Netrakona Durgapur	Total	**************************************	108,288 122,705 460,243 267,104 114,467 229,452 117,720 118,289 101,372 202,633 122,459 76,262 217,730 471,638 110,457	77	2 2	 	3 	 17 	 2		1	1	1 7	3 	 	8 7 20 4 2 8 5 2 6 1 12 75	
	Faridpore		Palang Goalundo Pangsa	Total		81,288 107,415 100,257 164,389 186,983 163,619 66,153 85,841 116,043 286,250 97,386 150,566 65,069	 1							 	27 21 	8 1	"1" "1" "3" "3"	1	1 1 1 1 39 1 3 46	4 . 4.4.4
	Nonkhali		Fenny Chhagalnais Hattia Begamganj Lakahimpur Sudbaram	Total		72,467 182,697 109,278 40,246 128,933 113,521 96,164 80,742 773,917	 1 1 1 1	1				::: ::: ::: ::: :::				 1			 2 1 2 2 7	00000

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanas in which Vaccinations were performed - continued.

					Deaths during-												1 2 3
CIRCLES.	Districts.	THANAS IN WHICH THE VACCINATIONS WERE PERFORMED.	POPULA-	April 1587.	May 1887.	June 1847.	July 1897.	August 1887.	September 1867.	October 1887.	November 1887.	December 1987,	January 1888.	February 1888.	March 1898.	TOTAL.	RATIO OF DEATHS PER
	Dacca ,	Keraniganj	164,287 119,515 164,159 243,468 275,484 164,196 100,009 174,831 202,788 91,199 160,235 143,012 2,023,628										 2 3 	2 2 7 2 2 	8 4 10	10 2 14 12 	*01 **** *04 *07 *** *** *** *** *** *** *** *** ***
EASTERN BENGAL-concluded.	Tipperah	Brahmanberia	223,751 176,971 125,879 78,581 152,322 143,222 112,034 86,872 103,218 114,162 172,347	 1		 4						 1 	9	1 2 	3	4 	*01 *13 *00 *05
	Backerganj <	Barrisal Bauphal Nalchiti Verozepur Jhalokati Bhandaria Gulachipa Gaurnaddi Medhiganj Hackergauj Bhols Patuakhali Surupkati Gulsakhali Mutbar Barhanudi Total Total Total CIECLE	113,733 95,188 77,075 115,049 141,953 73,552 59,037 144,192 146,711 136,396 123,169 173,801 160,284 98,732 96,032 96,032 1,881,764	1 1 1 1	1	4	1	22 3 3 3 5	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··	22 1 1	3 3 5 5 4 2 2 2 6 29 33	23 23 53	14 3 4 2 2 1 1 29	 32 22 1 1 	 1 1 89	28 128 122 66 1 7 2 5 4 45 1 141	**************************************
	Manbhum {	Purulia	177,487 24,258 67,133 35,384 133,847 68,615 106,668 45,793 39,740 89,178 39,173 18,417 39,854 50,027 48,018 64,242 1,048,924	3												 3	*04
MANUAL.	Hazaribagh {	Hasaribagh Chatra Gowan Bagodhar Simuria Kashmar Chouparan Jageswar Burbi Dumhri Kharackdiha Kodarma Huntenganj Hamghur Tandowa Pachamba	87,718 04,018 55,875 59,302 87,029 47,094 70,437 53,593 68,686 150,545 73,806 56,954 72,953 55,780 86,097				3		1		2 				 2 	3 1 8 2 9 1 1	**************************************

Statement showing the Deaths from Small-pox during the year 1887-88 in the Thanas in which Vaccinations were performed—continued.

-	•						_	1	DEATH	DUR	NG-					1	FER TION.
	Districts.	THANAS IN WHICH VACCINATIONS WERE PERFORMED.	POPULA- TION.	April 1887.	May 1887.	June 1887.	July 1887.	August 1867.	September 1887.	October 1887.	November 1887.	December 1687.	January 1889.	February 1888.	March 1888.	TOTAL.	RATIO OF DEATHS PER- 1,000 OF POPULATION.
	Lohardugga	Daltonganj Ranchi Charchi Choriya Choriya Lohardugga Korambe Tamar Sili Basia Palkot Barwya Biru Balumat Biru Balumat Brumat Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Chartarpur Charwah Ramkunda Hosseinabad	79,655 36,591 75,899 64,300 102,515			4 7	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9 1 1 3 			1		5	 	112 	12 9 1 10 21 10 10 6 7 6	*18 *67 *01 *23 *15 *08 *05
	Singbhum{	Chaibassa	76,408 165,709 77,002 31,127 555,958			23			under	 1 1 regist	 ration.	 2 2	12	1 9		113 3 4	·01 ·01 ···· ·007
	Pains		170,580 233,318 78,032 91,477 27,674 97,001 120,613 180,362 93,824	1 11 5 1	6 5 5 5 2 5 2 2 5 3 2 6		**** \$ \$ **** *** *** *** *** *** 7 \$ 27	 2 1 1 4 1 2	 2 2 2 3 4	 1 2	7	10 24	 7 24	.	1 1 2 1 8 13 25	20 10 5 2 1 5 21 21 17 28 2 104	111 111 111 111 111 111 111 111 111 11
**************************************	Gya	Arwal	. 176,805 245,429	8 1 1 3	5 5 4 2 1 1 15	5 10 2 3 1 8	 8 2 2 2 6	 2 1 1 2 5	 2 ₂		"8 ""1	3 1 8	1 "8 "1 1 1 19	₆	1 4 8 4	15 29 45 2 24 16 52	-0'-4
	Shahabad	Domrson Kharghar Belouti Bhabus Dehrie Arrah Dhangain Buxar Mohania Piru	133,942 242,103 104,643 183,311 196,098 28,834 321,433 179,916 144,587 179,482 1,845,822 4,739,818	3 8 11 9 12	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 4 7	- 4 	3 5 8 14	3 2 1 1 	- 4 	 2 		2 2 2 4	2	2		000000000000000000000000000000000000000
	Cuttack	Jajpore	185,381 289,505 170,325 91,018 249,770 215,001 109,401 183,677 66,900	18 46 10 15 5 17 14 7 14	1 13 10 3 10 3 20 3	10 12 1 1 3 5 	3 2 1 6, 2 1	1 1 2 1 3 3 2 1 2 1 1 9	1 2 1 1 2 1 1 1 1 9	"1 "1 "1 "3	1 2 1 2 3 6	 5 9 9 1 1 	19 7 2 5 8	8 9 8 21 24 1 18 12 3	6 11 4 26 16 16 8 22 18 22	102 58 103 65 40 66 76	56 64 39 39 44 11

Statement showing the Deaths from Small-pow during the year 1887-88 in the Thanas in which, Vaccinations were performed—continued.

							•		BEAT	iis Du	RING-	•					PRE
Crecies,	DISTRICTS.	THANAS IN WIICH VACCINATIONS WHEN PREFORMED.	Popula-	April 1887.	May 1867.	June 1887.	July 1887.	August 1867.	September 1867.	October 1887.	November 1887.	December 1887.	January 1888.	February 1888.	March 1888.	TOTAL.	BATTO OF DRATES PER
ORISSA— concluded.	Puri	Puri Pipli Gopi Khurda Banpur	197,841 920,782 116,167 269,478 53,927	12 11 3 5	12 8 2 3	6 2 1	12 12 1	4 1 8 	9 23 1 4	11 ₂ 5	13	15 4 17 7	1 7 1 17 5	 29	6 6 2 21	100 40 35 112 25	186 14 14
5 है]		Total	864,195	31	25	9	19	8	16	21	36	43	31	34	39	312	.3
	1	Tributary States	379,574			· 	· 			or regi						· 	1
		TOTAL OF ORISSA CIRCLE	2,961,665	169	90	48	84	276	25	23	42	69	108	149	164	944	-3
	Southal Pergunnals.	Dumka Rajmehal Pakour Deoghur and Jamtara Godda	861,111 243,474 204,919 389,665 348,403	 2	, ::: ::: :::	:: :::	s		 		:::	:::	:::		₁	₄	0.
Ì		Total	1,547,682	2			8								1	-6	.0
SONTHAL PERGUNNARS.	Bhagulpore	Colgong	186,585 134,227 262,678 135,328 140,379 98,427 88,403 299,042 153,972 77,644 148,560 208,508	 1		1		 	1 	::: ::: ::: ::: :::			44 		1 1 	3 1 1 1 1	.0.0.0
ĕ	ĺ	Total	1,903,088	8		1		1	1					1	2	9	.0
	Monghyr	Swajgura	166,263 199,480 81,736 865,954 143,079 208,633 879,794 122,389 112,154 109,540	 1 5 2 10, 5 	 3 8	 6 1	 	 1 8 	 1 	::: ::: ::: ::: :::		1 2 	 1	 1 	 1 1	1 2 2 12 6 14 16 1 8	000000000000000000000000000000000000000
		• Total	1,884,021	26	10	7	- 6	-8	1			4	9	2	2	62	.0
•		TOTAL OF SORTHAL PER- GUNNAHS CIRCLE TOTAL FOR THE PROVINCE	5,334,716	31 386	10	8 158	8	105	<u>3</u>		104	164	254	3 272	5 333	77 2,219	.0
		Municipalities, Dispensaries,	24,28,040	- 60	69	40	86	24	14	14	14	27	39	47	57	431	.,
		GRAND TOTAL	55 757 900	386	818	198	178	129	78	67	118	191	293	319	590	2,650	-0
		GRAND TOTAL	55,757,296	900	010	150	110			"						-,000	

Office of the Sany. Comme. for Bengal,

The 10th May 1888

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

B.
Statement showing the Total Deaths registered from Small-pox IN ALL THE DISTRICTS of the Bengal Province during each month of the year 1887-88.

				- [1	NUMBER OF DRATES DURING-											LY OF			
Di	(STRIC) T 8.			Population.	April 1867.	May 1887.	June 1887.	July 1887.	August 1867.	September 1887.	October 1887.	November 1887.	December 1887.	January 1868.	February 1888.	March 1888.	Total	RATIO OF DEATHS PRE 1,000 OF POPULATION.	Remañi
Dalcutta			•••		483.219	•••	2				•••		.,		1		1	4	.008	
Burdwan .		•••	***		1,391823,				-	1		7	4	1			2	15	*01	
			•••		1,041,752						,,,						1	1	-0009	
			•••		794,428			l										•••••		
Midnapore	•••		***		2,515,565	1	2	° 3	1					• 1	1		1	10	.003	
Hughli inclu	iding !	eram	pore		1,015,005		٠ ١	ļ		1						•••	2	8	.003	
4-Pergunna	he	••			1,618,420		4				.1	1		1		2		9	-005	
luburbs of C	alout	a	•••		251,430		1	<u></u>	<u></u>	<u></u>	<u></u>	2	3		2		6	14	-05	
Total of 2	4-Peri	runna	hs		1,800,859	_::_				<u> </u>	1	3	8	1	2	2	. 6	23	.01	
Howrah	•••	•••	• ••	•••	685,381	5	2		1	1		2	1		•••		3	16	.03	
Nuddes	•••	•••	••• .	}	1,655,721	•••	8	3		1		1	3	8	2	8	4	23	.01	
		•••	•••		1,939,875	•••		·												
Hurshidaba	d	•••	•••		1,226,790	•••	•										1	8	*004	
	•••	•••	•••	•	1,079,948	1				· ·					•••		2	3	.002	
	•••	•••	•••		1,514,346	1	8	1	6		,			2		1	•••	20	.008	
	•••	•••			1,538,638	2		1			•••			***	2		 81	5 89	-04	
	•••	•••	•••		2,097,984	15	6		•••	•	•••			•••		28			1	
		•••	•••	***	734,358	•••	•••					•••	•••			•••			,	
		•••	•••		1,311,728		10	···	 8	 1	 1						•••	*39	-24	
			•••		156,137 581,562	19	1	1					•••	""			 6	7	.01	
#_13_1.		•••	•••		710,448	•••	1						"				1	2	.002	
		•••	•••		1,848,687	2	2					1	4	1	5		2	30	.01	
	•••		•••		2,116,350	-	1								6	14	22	43	-02	
Paridpore		•••	•••		1,631,734	1		1			1		3	28	9	3	1	• 47	-02	
- Backerganj			•••		1,900,889	12	11	4	5	6	5	8	29	23	29	. 9	1	142	-07	
Mymensing		•••		•••	8,051,966	15	7	2	3	17	2		,	1	12	6	10	76	-02	
Tipperah					1,519,338	1		4	1		ļ			1	11	8	5	32	-02	
Chittagong	***	•••		***	1,182,841		1		١							1		2	.001	
Noakhali					820,772	5	1		١.,]				1			. 7	-008	
Patna	***	•••			1,756,856	27	80	16	82	16	14	3	8	25	89	35	32	277	-15	
Эув		•••			2,124,682	46	102	64	80	17	4	4	0	12	17	20	50	875	7	
Bnahabad	•••	•••	•••		1,964,909	64	76	64	196	191	121	92	86	42	10	7	6	955	*48	
Mozufferpor	Ð	•••	•••		ა,582,000	35	80	12	8		1	8	1	1	10	14	42	157	*04	•
Durbhangs	···	•••	•••	•••	2,633,417	39	84	25	8	5	1	1	1	2	6	8	23	153	-05	ł
arna	•••	•••		•••	2,240,382	29	70	47	33	17	12	5	3	2	2	2	31	251	-11	l l
Thumperun					1,721,605	113	181	120	66	34	9	15	24	80	44	69	130	835	i	
-	•••	•••	•••		1,969,774	27	17	8	*	8	1		1	5	3	3	2	. 74	(
Bhagulpore Ionthai Peri		 La	•••	•••	1,966,158 1,568,093	7 2	6	1		1	1					. 1	8	20	1	
			•••		1,795,065	149	66	37	16	19	12	2		26	76	115	126	643	1	
	•••	•••	•••		888,487	81	25	13	20	8	16	21	36	43	81	34	40	818	3	1
Balasore Hazarıbagh		•••	•••		945,280 1,104,742	18	15	7 2	6	5	1	•••	2 2	9	136	126	85	410 18		
ohardugga		•••	***		1,609,244	3		21	18	17			1		12	8	12	97	-06	1
ingbhum			•••		561,964							1		2		1	8	7		
danbhum .	•••				1,058,228	3												8		
Ratio of D	43	Tot			66,597,103	666	781	465	478	361	208	169	226	261	477	512	691	5,287	. 07	
meno or D	ediae	Der	1.000	OF		.01					,			1	1	1		1		1

Office of the Sany. Commr. for Bengal,

The 10th May 1888.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Benga

RESOLUTION.

SANITATION.

Calcutta, the 10th September 1888.

READ-

The Report of the Sanitary Commissioner for Bengal for the year 1887, including the Report on Vaccination in Bengal for the year 1887-88, dated 18th June 1888.

Read also-

The Report for the previous year and the Resolution recorded upon it.

The remarks in last year's resolution on the length of the Sanitary Commissioner's report have been attended to by Dr. Lidderdale, who has succeeded in reducing his report from 163 to 65 pages without at the same time omitting anything of importance. The section relating to personal proceedings might be still further shortened.

2. Registration of Births.—Births were registered in 100 towns, against 45 towns in 1886. It is no doubt due to the number of towns in which registration was enforced for the first time that the recorded birth-rate fell from 21.04 per 1,000 to 19.35. The recorded birth-rate varied from 50.21 per mille in Jamal-pore to 66 per mille in Jehanabad. It is obvious that in many places sufficient attention has not been paid to the work of registration of vital statistics by the Municipal Commissioners who are at present responsible for it. The matter will be referred to the Municipal Department for such action as may be

found necessary.

Registration of Deaths.—The death-rate per mille for 1887 is 23.46 against 21.99 in 1886, and a mean ratio for the previous five years of 20.96. These figures indicate some improvement in the registration of vital statistics which is most marked in a more accurate record of the deathrate among children of less than five years of age. The number of deaths among children under one year has increased to 145.40 per mille from a quinquennial mean of 111.81. There is reason to think, however, that the apparent improvement in registration is not altogether real. Dr. Lidderdale points out that the death-rate is calculated on the population as recorded in the census of 1881, and that, allowing for the probable increase in population since then, the corrected death-rate for 1887 would be about 21.41 per thousand. The rates recorded vary from 35.31 per 1,000 in Monghyr to 12.53 per 1,000 in Mozufferpore. The former figure is probably very nearly correct, and it is most important to note that the apparently high comparative death-rate in Monghyr is not due to its being an unhealthy district, but mainly to the admirable way in which Colonel Ramsay enforces report by the village chowkidars of the district. At present the position of any district on the list is very largely determined by the interest taken in registration by the Magistrate and District Superintendent of Police, and the Lieutenant-Governor is compelled to observe that in too many cases the results shewn are deplorably inaccurate, and the figures supplied absolutely worthless, for purpose of comparison or as a basis for sanitary action. The attention of Commissioners of Divisions, and of the Inspector-General of Police, will be emphatically called to the matter, the importance of which is manifestly often overlooked. District and Sub-divisional Officers and District Superintendents of Police must be got to realize that the collection of correct vital statistics is an important part of their duty. They should be urged to take a personal interest in the work, and to test the figures supplied to them by their own knowledge of the sanitary conditions of various parts of their districts, by facts which may come to their knowledge regarding the prevalence of epidemics of cholers or malarious fever or other diseases, and by local enquiry during their tours. By these means they can effectually check, if not put a complete stop to, the tendency to leave deaths unreported on the one hand, or the possible risk of imaginary deaths being reported on the other.

4. The following table shows the death-rate from various causes during the quinquennial period 1882-86, 1886 and 1887:—

			RATIO OF DEATES PER 1,036 OF POPULATION.												
			In 1837.			In 1886.			In 1882-86),					
		Urban.	Rural.	Province.	Urban.	Rural.	Province.	Urban,	Rural.	Province.					
Oholera	•••	3.40	2.57	2:60	4:12	1.70	1.78	4·32 ·43	2.03	2.11					
Small-pox Fevers Bowel-complaints	•••	13 10:45 3:48	05 16:66 76	16.44 185	08 12·29 3·77	·06 16·11 ·73	15:97 84	13.86 3.72	·15 14·87 ·78	14:84 14:84 -89					
Injury Other causes	•••	·40 6·22	·40 2·97	3.09	·50 6·51	·43 2·74	·43 2·88	6·19	2.42	2.56					
Total	•••	24.12	23.44	23.46	27.29	21.79	21.99	28.98	20.65	20.96					

The most striking feature in this table is the close approximation between urban and rural mortality as compared with previous years. Dr. Lidderdale makes no remarks on the subject in discussing these figures, though it would appear to require explanation, as, while the recorded death-rate rose in rural circles, it actually fell in urban circles considerably below the quinquennial mean. From another part of his report it would appear that he attributes the decline to the fact that the charge of registration has been made over to municipal bodies (paragraph 57). This subject had been already noticed in a previous paragraph, and the Lieutenant-Governor trusts that measures may be taken to remove a decided blot in Municipal Administration. The only other noteworthy feature is the considerable mortality from cholera.

Cholera.—The recorded deaths from cholera rose to 172,578, against 118,368 in 1886, and a quinquennial mean of 139,869 for 1882-86. The number of villages attacked was 23,894, against 21,567 in 1886. The severity of this disease varied greatly in different parts of the province. In Bengal Proper the mortality fell to 1.70 per mille against 2.17 in 1886. The Suburbs of Calcutta, favourable climatic conditions notwithstanding, maintained its preeminence with a death-rate of 8.31, against a mean rate of 8.58 for the previous five years. The bad sanitary condition of Raneegunge, due, according to the Sanitary Commissioner, to neglect of duty by the Municipal Commissioners, afforded a breeding ground for cholera. It should, however, be mentioned that, as appears from the General Administration Report of the Burdwan Division, the Municipal Commissioners of Ranigunge were most energetic in remedial measures after the disease had made its appearance. It appeared there in the cooly depôts. and was transmitted thence through Northern Bengal causing much loss of life. In Serampore there was an outbreak, ascribed to the use of bad water. In Midnapore cholera was imported by the pilgrims returning from Pooree. In Behar the number of deaths was 84,530, against 25,709 in 1886, and a quinquennial mean of 41,415, giving death-rates of 3.65, 1.11 and 1.79 per mille respectively. districts most affected were Gya, Chumparun and Shahabad, with death-rates of 8.05, 7.50 and 7.15 per mille. Peculiar atmospheric conditions were associated with the appearance of this epidemic, "such as absence of the usual west winds, replaced by damp winds from the east, and a heavy downpour of rain in the end of May." In Gya town, where the death-rate was 878, sanitary improvement is greatly needed. In Shahabad the Civil Surgeon enquired as to the cause of the outbreak, and says "for all there is the same tale to relate—foul wells, foul tanks, human and animal ordure everywhere, damp houses, damp surroundings, and neglect of the first principles of sanitation." In Sarun the death-rate was 3.46, the largest on record for that district. It was most virulent there in Sewan in the municipality and rural circle. The former had a death-rate of 5.63. Chumparun was visited by the Sanitary Commissioner in August, who submitted a special report. He found here the usual insanitary conditions, and also noted that the epidemic "was preceded by two years of unusual rainfall, was associated with a very plentiful fruit crop, and with early rainfall and an absence of west winds." In Orissa the death-rate was 4.87 against a quinquennial mean of 4.18. The Puri district had a death-rate of 9.75—the highest in the province. Several sanitary improvements were proposed in the pilgrim routes. "It is intended in Cuttack to extend the Puri Lodging-house Act along the main line of road, and to allot to the Sanitary Committee of the Local Board funds for conservancy at principal halting-places." Dr. Lidderdate recommends similar measures along the Grand Trunk Road. A copy of his remarks will be forwarded to the Municipal Department. In Chota Nagpore the death-rate was 2.45 per 1,000 against .30 per 1,000 in 1886 and a quinquennial mean for 1882-86 of .67. It was worst in places near the Gya and Shahabad districts.

Small-pox.—The number of deaths is the smallest on record, only 05 per mille, and testifies to the good results of systematic vaccination. 47 per cent. of the mortality is due to the Patna Division, where vaccination has only been extended to three districts. In the Orissa Division vaccination is said to be backward and inoculators active, and the result is that 32 per cent. of the deaths are reported from that division. Dr. Lidderdale states that many of the deaths put down to small-pox are really due to measles or fever attended by anomalous While the death-rate for rural circles is 05 per mille, urban circles show a mortality of 13, and the very unsatisfactory explanation given by the Sanitary Commissioner is neglect of vaccination and inefficient administration

of the Compulsory Vaccination Act.
7. Fever.—The statistics of fever mortality give a death-rate of 16.44, the highest yet recorded. The increase, however, appears to be due to improved registration, for the general view of Magistrates and Civil Surgeons is that the year was not an unhealthy one. There is a marked decline in the fatality in towns remarked on in paragraph 4. The Sanitary Commissioner remarks that of the eight districts heading the list, he believes all, except Monghyr, to be among the most feverish in the province, and he considers that this proves that in some parts of the country registration of deaths is beginning to show some relation to actual facts. The Rajshahye Division shows the very large death-rate of 27.16 per 1,000 from fever, but the rise of 6·11 over the average for the five years 1882-86 appears to be entirely due to better registration. In the Presidency Division the death-rate from fever in Nuddea has fallen from 29 22 per mille in 1884 and 26.85 in 1885 to 21.99 in 1887. It appears, however, very doubtful whether this is due to anything but defective registration last year. In Tipperah fever was so severe that five hospital assistants were sent to treat cases. The returns, which must be altogether untrustworthy, only show a death-rate of 12.63. In Shahabad there was a decided change for the better, the death-rate having fallen from 29.20 in 1886 to 20.62. The Civil Surgeon is of opinion that the canal irrigation there has intensified pre-existing influences, tending to produce disease.

8. Mortality from other Causes.—The mortality from bowel-complaints, injury and other causes during the year amounted to 56,893, 26,630, and 204,813 against 55,693, 29,081, and 190,818 respectively in 1886. The record of deaths from other causes is not reliable, and depends very much on the practice of the reporting and registering officers. The ratio for the whole province is only 3.09 per mille; but in Banpur rural circle in Pooree district it rose to 30.54 per mille, and the ratio of the Pooree district is 14.72, followed by Backergunge with a ratio of 7.83.

Vaccination Operations.—The following table shows the number of

primary vaccinations performed in 1887-88:-

				PRIMARY.
	CIECLES.			Total number of operations in 1887-88.
Calcutta .	••	•••	•••	9,809
Metropolitan Circ	cles tta, including Centr	el	inetion	391,912
Depôt and Cool	y Depôts		···	8,768
Total of M	etropolitan Circles	•••	•••	400,675
Darjeeling	Circle	•••	•••	274,876
Ranchi		•••		144,782
Sonthal Pergunn	ahs ,,	•••	•••	108,940
Eastern Bengal	4))	•••	•••	540,467
Orissa	,,	•••	***	84,995
Behar	21	•••	•••	70,844
Total of V	accination Circles	***	•••	1,684,888
Municipalities, di	spensaries, &c.	•••	•••	77,409
	GRAND T	OTAL	•••	1,712,297
•				

It is very unsatisfactory that while the total number of operations has increased by 108,378 as compared with the previous year, the number of operations in municipal and other areas, not included in the departmental circle, has decreased by 9,140. Dr. Lidderdale's remarks regarding the very useful depôt for bovine lymph in the Suburbs of Calcutta, and the desirability of establishing similar institutions on a smaller scale in large municipalities, such as Patna, Dacca, &c., will be sent to the Municipal Department. It is satisfactory to find that on the whole steady progress is being made, though there is still much opposition in many districts. From Moorshedabad and Beerbhoom it is reported that the long sustained opposition of the Ferazis is

being steadily overcome.

10. In the Sonthal Pergunnahs circle the services of the Government vaccinators were dispensed with, and the licensed system was introduced throughout the circle. The number of licensed vaccinators employed throughout the province was increased by 130. The Compulsory Vaccination Act (Act V (B.C.) of 1880) was extended to 40 towns during the year. In a good many places more use might be made of the Act. Thus in Patna the backward state of vaccination is said to be due to the apathy and indifference of the Municipality, as well as to the incompetence of the subordinate vaccination staff. In Motihari again no one was prosecuted up to the close of the year, and only 240 persons were vaccinated out of a population of 10,307. Dr. Lidderdale reports, however, that on the whole progress was made, and that Municipal Commissioners are said to have begun a more active administration of the law—a statement which it is difficult being steadily overcome. begun a more active administration of the law—a statement which it is difficult to reconcile with the falling off in the number of operations noted in the previous paragraph. The attention of the Municipal Department will be directed to this part of the report. The decrease in the death-rate of vaccinated areas from 13 in 1882-83 to 04 in 1887-88 contrasts very favourably with that in other areas, where it has varied between .55 in 1884-85 and .16 in 1886-87 and 1857-88.

Expenditure on sanitation .-- There has been a satisfactory increase in sanitary expenditure, excluding roads, of Rs. 1,04,994, but there are still many towns in which the expenditure under this head is very inadequate, while there were 25 towns in which nothing was spent on original sanitary works. The most unsatisfactory feature of the expenditure is the very small sum allotted to the disposal of the dead, as in some places burial-grounds for Mahom-

- edans are an urgent sanitary want.

 12. Sanitary works.—The Bhagulpore water-works progressed satisfac-Nothing has been done for the water-supply of the towns on the right bank of the Hooghly from Scrampore to Howrah, notwithstanding the conditions on which Howrah was arieved of its police charges. In Hooghly Mr. Toynbee's efforts to get the owners of tanks to come forward and make them over to the District Board for the purpose of being repaired and maintained as a source of drinking water-supply met with no success. In Burdwan Rs. 5,800 were advanced under the Land Improvements Loans Act to some landholders and tenants for cleaning and deepening old and silted up tanks and for excavating new ones. In Dinagepore a large scheme of town drainage was in progress at the expense of the Maharajah of Dinagepore. In Moorshedabad Rs. 1,645 were spent on the Baluchur drainage scheme. In Midnapore Rs. 29,692 were expended on the Surpai drainage works and upwards of Rs. 10,000 on protective embankments. In Howrah the Commissioners spent Rs. 30,000 on a small tramway for the removal of night-soil beyond municipal limits.
- 13. Extension of sanitary laws.—The Municipal Act III (B.C.) of 1884 was introduced into three towns. The Compulsory Vaccination Act (Act V (B.C.) of 1880) was introduced into 40 municipalities. Act IV (B.C.) of 1865, forbidding inoculation, was extended to 7 thanas in Backergunge and 6 thanas in Gya district. It is now in force throughout Lower Bengal, excepting Chittagong, the greater part of Orissa, and four-and-a-half districts of Behar.

 The Local Self-Government Act III (B.C.) of 1885 was introduced into 22 districts, and is now in force in all but 7 districts.

14. The Sanitary Commissioner describes at some length the result of his inspections and of the inspections by circle officers. Only four of the towns visited were found to be in a satisfactory condition. He shows that the unsatisfactory results of the sanitary inspection of villages is not due to any want of a clear perception of what should be done, but to the absence of any agency to

see that reforms suggested are carried out. When a Sanitary Board has been constituted as directed in the Government of India's Resolution of the 28th July, it will be its first duty to draw up a practicable scheme providing an agency to carry out the reforms on which it may decide. Sir Steuart Bayley has had under consideration various proposals regarding rules to be passed for village sanitation, but he proposes to defer passing orders till he can have the advantage of the suggestions of the Board. The Municipal Department will be asked to consider, in addition to the matters to which their attention has been specially called, the remarks made by the Sanitary Commissioner upon various points noted in the Report connected with sanitation of areas under the Administration of Municipal, District, or Local Boards, and the means of getting better work done under this head by Municipal Boards.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

Chief Secretary to the Govt. of Bengal.

No. 2655P.

Copy of the above Resolution forwarded to the Sanitary Commissioner for information and guidance.

No. 2656P.

Cory of the above Resolution and of the Report forwarded to the Inspector-General of Civil Hospitals, for information.

Circular No. 12P.

Corv of the above Resolution and of the Report forwarded to all Commissioners of Divisions, whose special attention is invited to the remarks contained in paragraph 3 of the Resolution and paragraphs 4 and 5 of the Report.

No. 2657P.

EXTRACT paragraph 3 of the above Resolution, and paragraphs 4 and 5 of the Report, forwarded to the Inspector-General of Police, for information and communication to District Superintendents of Police.

No. 2658P.

Corv of the above Resolution and of the Report forwarded to the Municipal Department of this Office for information, with the request that special attention may be bestowed to the remarks contained in paragraphs 2, 5, 9, 10 and 14 of the Resolution and paragraphs 47, 90, and 102 of the Report.

By order of the Lieutenant-Governor of Bengal,

R. W. CARLYLE,

Offg. Under-Secretary to the Govl. of Bengal.

CALCUTTA,

The 10th September 1888.

NINETEENTH ANNUAL REPORT

OF THE

SANITARY COMMISSIONER FOR BENGAL

FOR THE YEAR 1886.

INCLUDING THE ANNUAL REPORT ON VACCINATION IN BENGAL FOR THE YEAR 1886-87.

BΥ

DEPUTY SURGEON-GENERAL R. LIDDERDALE, M.D., Sanitary Commissioner for Bengal.

Calcutta:

PRINTED AT THE BENGAL SECRETARIAT PRESS.

1887.

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NINETEENTH ANNUAL REPORT

OF THE

SANITARY COMMISSIONER FOR BENGAL.

YEAR 1886.

INTRODUCTION.

1. This Report presents the vital statistics and Sanitary history of the Subjects embraced by this Report.

Province of Bengal for the calendar year 1886, and the general history of Vaccination of the same Province for the financial year 1886-87; but the statements appended to it do not include the figures for the Town of Calcutta.

SECTIONS I, II, III, & IV.

2. Under standing orders on the subject, the information required under the above-mentioned Sections will be furnished in the Report of the Imperial Sanitary Commissioner. It consequently finds no place in this Report.

SECTION V.

VITAL STATISTICS.

3. Births were registered during the year under review in 45 principal REGISTRATION_VALUE OF_IN Towns, against 46 in the preceding year, the exception being the township of Mokameh in Patna, BIRTH REGISTRATION. which was abolished. They amount to 34,734 in opposition to 40,752 in 1885, showing a diminution of 6,018, and distributed over the population—numbering 1,650,855—among whom they were chronicled, yield a birth-rate of only 21.04 per 1,009—a radically defective result. An examination of the returns shows that only 4 towns against 11 in 1885 presented what may be accepted as approximately correct rates,

and that in 22 against 14 the omissions in registration were conspicu-

		results.
Ratio per mille.	9	Ratio pe
Bettiah 39.74 Revilgunge 38.05 Brahmanberiah 32.94 Brahmanberiah 32.94 Brahmanberiah 32.94 Brahmanberiah 32.94 Brahmanberiah 32.94 Brahmanberiah 32.94 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 39.74 Brahmanberiah 32.94 Brahmanberiah .	rah (anaghat assore usirhat arjiling uridpore upur antipore uri hupra anchi idnapore upreah alli acca urh uttack uburbs of Calcut ozufferpore urulia ehar iehnaghur	. 8·02 . 8·67 . 10·14 . 11·92 . 12·10 . 12·75 . 14·74 . 15·51 . 16·18 . 16·94 . 18·87 . 19·30 . 19·34 . 19·34 . 19·34

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These towns are ously large. cited in the margin. In the rest of them the birth-rates ranged from 21.49 to 30.54 per 1,000 of From a review of population. these figures it is clearly apparent that the defects of the year under notice are much greater than those of the preceding year—and it is a matter of much regret that several important towns, notably the Suburbs of Calcutta, should appear on the defective list. I trust, however, that as the work of registration has, under the recent orders of Government, passed from the hands of the Police to Municipalities, substantial improvement will be effected in future years. But to

attain this end the personal and sustained attention and supervision of the Municipal Commissioners are indicated.

Referring to the death-rolls, it is seen that 1,455,305 deaths, or at the rate of 21.99 per 1,000 of the population, were DEATH REGISTRATION. recorded therein in 1886 as opposed to 1,504,745, or at 22.74 per 1,000, during the preceding year; or, in other words, that 49,440

fewer deaths were registered during the year under review. Sifting the sub-

Approximately	correct	results.	Defective results.						
		Ratio per mille.			Ratio per mille,				
Shahabad	•••	36.17	Mozufferpore		13.24				
Julpaiguri	•••	35.32	Durbhanga		13 25				
Rungpore	•••	32.22	Southal Pergun	nahs	13.65				
Pubna	•••	31.73	Chittagong		13.95				
Nuddea	•••	28.91	Singblum		14.48				
Monghyr	***	28.89	Manbhum		14.88				
Rajshahye	•••	27.01	Maidah		15.21				
Backergunge	•••	20.71	Lohardugga		16.86				
Bhagulpore		26.62	Bankura		16.90				
Balasore	***	26.08	Tipperah		17.87				
Bogra.	•••	26.02	Faridpore		18.01				
Darjiling	•••	25.91	Mymensing		18.08				
Dinajpur	•••	25.88	Howrah		18.68				
(i ya		25.23	Hazaribagh		19.04				
•			Burdwan		1.48				
			Cuttack		19.59				

ject further, it is found that of the 645 registering circles in Bengal, 4 registered deaths at 50 and above per 1,000 of population, 14 at 40 to 50 per 1,000, 81 at 30 to 40, 298 at 20 to 30, and 248 at under 20, the corresponding numbers the preceding year being 8, 22, 89, 324 and 204; and that 14 districts against 15 recorded approximately correct, and 16 against 12 defective results, vide marginal figures, the rest of the districts yielding casualty rates ranging from 20.04 to

23.87 per 1,000 of population. The prima fucie inference from a consideration of these figures in comparison with the record of the preceding year would be that, a retrogression in registration had occurred; but there are facts associated with the falling off which militate against this view of the matter. General testimony pronounces the year under review to have been a healthy one, and cholera alone exhibits a reduction of 55,399 deaths. Even in the Monghyr district, where registration was most carefully and energetically looked after by Colonel Ramsay under his admirable system described on page 3 of my Report for 1885, there was a fall in the number of deaths recorded from 63,555 to 56,917, and in the 17 districts in which an enhanced number of deaths were registered, the increment in the majority of them is attributed to better registra-Nevertheless, there is no doubt that many individual defects still exist which vitiate the general result, and which might, if more care and attention were exercised by the local officers concerned, be rectified. Noticeable instances of irregularities in this direction are the following:-Personal enquiries instituted by the Magistrate of Maldah into deaths which occurred in villages, resulted in his finding that the events in many villages had not been reported at all, owing to the carelessness of the punchayet and chowkidars. assembled the chowkidars and pointed out to the defaulters their shortcomings, and punished those who neglected their duty most. The District Superintendent of Police appears to have been interesting himself in the matter, but,

as usual, threw all the blame on the chowkidars. If the regular Police were to ensure the weekly attendance of the chowkidars, and would systematically take down the information they bring, a very different result would be obtained than a death-rate of 15.5 per 1,000 of population. There is a very remarkable feature in the registration of this district, viz. that the urban mortality is only about half the rural, showing even more neglect of registration in towns than in the district. The Deputy Commissioner of Julpaiguri reports that the registration is very defective, and that in one tea-garden alone, where 200 deaths occurred, none of them were reported owing to the scarcity of police in the Duars. The Magistrate of Tipperah is of opinion that 25 per cent. of the deaths in the district escaped registration. The Civil Surgeon of Dacca believes that the deaths of very young female children and of old women are rarely registered, such casualties being considered beneath even a The Civil Surgeon of Durbhanga is of opinion that not half chowkidar's notice. the deaths are registered, and the Magistrate reports that the Police Officers did not appear to have made sufficiently close inspection as to chowkidars having failed to report deaths, and that chowkidars who neglected this duty were only warned. Considering what has been done in the neighbouring district of Monghyr by Colonel Ramsay, the District Super-intendent of Police, there is considerable discredit attaching to the administration of Durbhanga with regard to registration. Nothing is simpler than Colonel Ramsay's plan of requiring the attendance of chowkidars, and consequent easy access to the information sought. Similarly all that was done for the improvement of the very defective registration in *Lohardugga* was to warn some chowkidars. The Magistrate of *Nuddea* thinks that by the removal of bodies to the banks of the Bhagirathi and Pudda rivers for cremation, many deaths escape registration, as the deaths do not occur at the places of residence, and are consequently unknown to the Police. The Superintendent of Vaccination, Santhal Pergunnahs Circle, has particularly pointed out large omissions of deaths near Rajmehal. On the other hand, the evidence of growing interest in the matter is indicated in several of the local reports. The following instances may be cited:—The Magistrate of Murshidabad reports that during his personal visits to the thanas to test registration, he noticed "a gradual increase in the efficiency of the machinery for registration, so that already the vital statistics are of great value in many thanas, and will soon be so universally." The Magistrate of Puri says that from personal enquiries he believes that on the whole the registration of deaths is satisfactory, that practically all deaths of adults are reported, and that it is only in the case of infants that omissions take place. The Magistrate of Bhagulpore is of opinion that registration in his district is "efficient."

5. The usual measures, as detailed in my previous reports, were adop
Measures adopted by this Office and ted by this Office and by the local Officers for the locally to improve Registration. Improvement and extension of registration. They need not be recapitulated here; but I am bound to mention that there is much evidence to show that the subject received added attention from many of the Magisterial, Police, Municipal, Medical and Vaccination Officers. The following special steps, worthy of record, were taken in this direction.

following special steps, worthy of record, were taken in this direction.

The memorandum book or hath-chitti system—a description of which has been given on page 6, paragraph 15 (4) of this Department Report for the year 1876, was adopted in the Dacca and Faridpore districts, and in the Naraingunge town. The hath-chittis are coming into more general use, and I believe that this machinery tends to systemize registration, and consequently to improve it, and that these ends will be more completely attained if their utilization is authoritatively rendered compulsory everywhere.

During the year, under the orders of Government, most of the Municipalities relieved the Police of the duty of registration and made their own arrangements for conducting the work, several entertaining especial establishments, and the others getting the work done through the agency of the Commissioners, or of existing municipal subordinates. It is hoped that this arrangement will have the effect of improving registration.

Monghyr.—Colonel Ramsay's scheme for improving registration, detailed in paragraph 8 of this Department Report for 1885, continued to be worked in this district as actively and with the same care as during the preceding

year, with manifest advantage. The number of deaths registered is certainly smaller, but this is ascribed to the general health of the district having been better, as there was a reduction of mortality from all the chief diseases, particularly cholera. Colonel Ramsay is inclined to think that now about 95 per cent. of the deaths that do actually occur are recorded; but in order to maintain efficiency, he asks that steps be adopted to bring pressure to bear on individual defaulters, or, in other words, that a Compulsory Registration Act be introduced into the district. The great and sudden increase in the number of deaths registered in 1885 gave rise to suspicion of falsification. The Magistrate therefore directed the Sub-divisional Officers and others, and Colonel Ramsay himself, to test the figures as much as possible. The Officers of the Vaccination Department were also requested to do the same. The result was that many omissions were detected, but no wilful falsification of the returns for the mere purpose of obtaining good results. It would be useful, for general information, to record here the manner in

Beat numbe	r.	Number of Houses.	Number of Deaths reported,	Average num- ber of Deaths per 100 Houses
1		1,689	202	17:28
3	•••	1,479 2,196	386 338	20°54 15°39
4	- 1	1,958	810	17.82
5	:	1,861	353	18.46
8		1,533	249	16 24
7		1,490	241	16.17
8		1,624	242	14.90
9	. 1	1,137	249	37.32
10		1.344	264	19.64
11	•••]	1.855	544 573	18°54 20°03
12		1,465 2,37 9	461	19:50
13 14		1,506	179	11.88
Station Total		21,613	4,323	17.26

Abstract of above table.

				-					
Ву	270	Chowkidars	4,323	deaths	111	24,613	bouses	•••	17.26
	100	,,	1,008	**	in	10,280	٠,	•••	0.80 2 3
,,	35	Chowkidars	236	**	in	8,096	••		6.94 E S
	19		70		in	1.528			4.28 3 3 3

which Colonel Ramsay tests and detects defective registration of deaths, and picks out for punishment the defaulting He first ascertains the chowkidars. average number of deaths registered in a station, and then eliminates from the total number of chowkidars who produced the average those whose work comes up to that figure. The next step is to ascertain the average work of the rest of the men and to eliminate the chowkidars who produced that average, and to proceed thus in a descending scale and find the lowest average turned out and the chowkidars who produce it. An illustration of his plan will be found in the tables given in the margin. The mean rate of 17.56 deaths per 100 houses is a decidedly

good one, as, reckoning five persons to a house, the death-rate is over 35 per mille. Colonel Ramsay truly says, "it is one thing to say that death registration is defective, and to reiterate orders to be more careful to do better in future, and quite another to be in a position to pounce down on and make an example of continuously disobedient careless men for the benefit of the others."

Colonel Ramsay's scheme of injistration was introduced this year into the Gya district, with, it is said, great advantage, fifty-eight village chowkidars

having been prosecuted for neglect.

Plans having the same end, but differing somewhat in details, were introduced into the Bankura and Hughli districts. In the former Mr. Gouldsbury, the District Superintendent of Police, made it a rule that each chowkidar shall on the day of his attendance at the thana or outpost, be examined as to the deaths which occurred in his village, thus reducing the work to a system. This plan is said to have worked well. In the latter a system of chowkidari parade was adopted which, it is reported, has effected a decided improvement in registration. The chowkidars are paraded daily at each police-station and outpost, when either the Sub-inspector, Head-constable, or the Writer-constable reads out a set of questions on police matters. The first question asked relates to death reports, and the answers of the chowkidars are then and there taken and entered in the Register of Deaths. The advantages of this system are that the attendance of the chowkidars at the stations is systemized and made regular, and a feeling of responsibility is entertained by them with regard to death reporting.

In the *Pubna* district, in addition to the reports received through the chowkidari agency, the school Sub-inspectors, Sub-deputy collectors and Canoongoes were required to note, during their tours, all deaths which occurred in the villages visited by them, and to enter them in a register kept in the Magistrate's office. This register is compared with the registers kept up in the registers.

tering circles, and much accuracy in registration is thus secured.

The improvement in registration which has taken place during recent years may now entitle the statistics to be considered Present value of Registration. as a basis for approximately estimating the health condition of the people over large areas, but by no means permit us to declare limited areas or registering circles to have a more or less established health status. Cholera and small-pox, being subjects of special report, escape notice less frequently than other diseases, and fatal bowel-complaints become associated with the former, while measles and fevers with eruptions are often classed with the latter. For fever many inflammatory diseases attended with febrile symptoms will always be substituted by the ignorant. Perhaps the largest omissions in differential registration, however, occur with regard to deaths from the general diseases which come under the nondescript term "other causes," although in this direction improvement is also seen. It is very difficult to secure a correct diagnosis of the death causes owing to the paucity of qualified medical practitioners in the rural areas of the Province. The appointment of Medical Inspectors under the provisions of the Local Self-Government Act will, I hope, partially meet this want. Dr. Dutt, the Civil Surgeon of Rungpore, suggests that now that numbers of native doctors and medical practitioners have established themselves in most districts, it would answer the purpose if their services were enlisted in the matter in selected areas placed under their charge under a proper reward system. A scheme like this will, the Magistrate correctly observes, require a special establishment; but he adds that so long as this, or any measure akin to it, is not adopted, it will be impossible to arrive at a proper knowledge of the prevalent diseases, and to exercise a proper control over them. But the first and most important thing of all is to obtain a knowledge of the actual number of deaths which do occur.

The provisions of this Law were extended during the year to the 31

Extension of the Compulsory Registration Act IV (B.C.) of 1873.

Bogra } Sherpore } Dinappur. Dainhat in Burdwan. Balli in Howrah. Baranagore.	In Bogra.	Kushtea Birnaggur Nuddea Chogdah Mohespore ir Dumka	Jes	
Rajpore Harripore Busirhat	In 24-Pergunnahs.	Rajnehal Sahebgunge Burhea Shaikpura Jajpore Kendrapara Ranchi in Le	ohard	In Sonthal Pergunnahs. In Monghyr. In Cuttack.
Satkhira)	In Khulna.	Turulla in M	#IJ DJ)	uiu.

towns named in the margin, and preliminary steps were taken for its introduction into several others during the Excluding current year. the latter, which will be noticed in next year's Report, the Enactment was in operation at the close of 1886 in 148 Towns and one Rural area in Darjiling. It should also be mentioned that, in order to assist the working of the Compulsory Vaccin-

ation Act V (B.C.) of 1880, the registration of births was, under orders of Government No. 1598T—M, dated the 2nd September 1886, revived in 51 towns, in which, although the Registration Act was in force, the recording of births had been discontinued under the Resolution of Government of the 20th August 1880. The subjoined statement showing the Towns in which prosecutions for breaches of the provisions of the above-mentioned law relating to the registration of births and deaths were instituted with the results, is submitted in accordance with the orders of Government on the subject:-

		provecute d.	acquitted.	a jage	fines re-	RATIO PER 1,000 C
Districts.	Towns.	Number prov	Number acquitt Number struck	Number warned, Number pending.	Amount of alised.	Births.
Burdwan	Burdwan	3 3 24 22 1 1	3		Bs. A. P. 0 11 0 25 8 0 0 4 0	22'39 25'5 Not yet 33'4 registered. Ditto, 25'7
Bankura Birbhum	Bishenpore Suri	1 1	1		0 8 0 Not stated	22-24 17-5 Not yet 17-2 registered,

Midnapore	PER 1,000 LATION.	RATIO P POPU	fines re-	ing.		led.	sk off.	itted.	icted.	prosecuted.								
Midnapore	}	1	ঠ	bend		MA	strat	abos	CODA	200		1.	wns.	To		cts.	Distr	
Midnapore	Deaths.	Births.	Amount slised.	umber		Number	Number	Number	Number	Number		r		-,43-44				
Hidnapore Committee Comm	21.	18:40												Midnanovo				
Chundrakoma	21.	Not yet registered.	1 3 0						10					Tumluk	}		re	didnap
	20.	Ditto.	1 6 0 3 0 0				1		3					Ghattal Chundrakona	l			
Bassbernich	30°	26 98	500				2		9	13				Serampore	§			uchli
Barnagore	19. 34.	Not yet				1 .	į								(•••	•••	
South Suburban	92	1	700				ļ	1	7	8	4			Howrah	.,.			owrah
Pergunnaha	29.	Not yet	6 6 0	.			1	4	12	17		:	•••	Baranagore	(
Persymmaha	12	Ditto.	1 4 0	- 1	1		_	1	5	5			•••	Rajpore				
Nachaetta	34°	Ditto.	100		ı		••••		2	2		•••		South ditto	_ }		nnaha	Dargii
Baduris	31° 25°	Ditto.	8 0 0		- 1		2		5	7	•••	•••	•••	Naihatti]	•••		- 2 61KU
	10.	Not yet		···8											- 11			
Santipore	30.	Ditto.	080						1	1			•••	Goberdanga	- il			
	21.				- (9							{			ıddea
City Murshidabad Sungipore 15 2 3 4 3 6 0 0 Ditto, Ditto, Jishahye State	22.	Not yet						1	1	2 7				Јевчоге				sore
Shahye	46 28	Ditto.	5 0 0												{		.b s d	rshid
rjiling Darjiling	87· 29·	27:48	089		- 1				1	1		•••		Beauleah	c		re	jeh a h;
Darce Darc		registered.			1.													riilina
Faridpore Faridpore 7	22	16:26	15 3 0		١.			- 1	21	22			•••	Dacea	ا۔			•
Chittsgong Chittsgong Chittsgong Chittsgong Chittsgong Chittsgong Chittsgong Comulish Comuli	32.		j	- 1	1		- 1	1	j						1			
Deperal Separation Separa	21.	-		- 1	1		i	1	- 1					•	- 1	•••		
Brahmanberiah	28				1		ì	i	1				•••			•	_	-
Dumraon	35"	32.94	6 2 0										h.	Brahmanberiah	{	•••	•••	pperab
Buxar	12.0		- 1		1	•••			- 1	15		•••	•••	Behar		•••	•••	tna
Depth Dept		registered.	i		1	•••		1		. 3	•••	•••	•••		{		1	ahaba
Talgunge Sitamurhi Sitam	29.4	-	1		1			•••			•••	•••	•••		9			
Sitamurhi	21.6	Ditto.	3 0 0		١.				8	11	•••			Lalgunge	{		pore	zufler
Tohanga { Madhubuni	26			- 1	1		1	ı										
Monghyr	18	Not yet	0 4 0							2					₹	•••	g a	rbhai
umparun âlotihari 23 21 2 15 4 0 Not yet registered. nghyr .	14°4 36°5				1.			,							{			un
mghyr	25	Not yet	15 4 0	- 1	1		1		- 1		1				1		un	mpel
Agulpore Shagulpore 1 1 1	251 811	20:64 43:72	64 12 0								- 1			Jamalpore			•••	nghvr
aguipore { Colgons	available	Data not	0 4 0			•••	{		1	1		•••	•••	Janue	-4	,		
Idah Old Maldah 1 1 Not yet registored.	35.0	Not yet													{	•••	re	ranj bo
Cuttack 35 30 4 1 19 6 0 18:87 Jajpore 2 2 10:14	82.0		1 4 0	5					2	7		•••	•••	Purneah		•••	***	rneah
Cuttack 85 30 4 1 1960 1887 3014 1 1960 1887 3014 1 1960 1887		Not yet		1			- 1			1		•••	•••	Old Maldah		•••		
Jajpore 2 2 10:14	1	-									l			Cotton				
6 Haveribach 81 69 12 813 0 1078	19.6				1											•••	•••	·'ack
Zar. Pagb Chattra 35 34 1 40 0 0 Not yet registered.	30.6			::			:::	12	69 34	81 35	:::		•••				z b	ZL:.PA
Total 994 716 154 67 23 34 424 3 9			424 3 9	34		23	67	154	716	994		Fotal	т					

This is a much more extended list than that submitted last year. It shows that 994 persons against 481 in 1885 were prosecuted in 61 against 48 towns; that of this number, 716, or 72 per cent., against 298, or 62 per cent., were convicted; and that the fines imposed on, and realised from, defaulters amounted to Rs. 424 against Rs. 202. This comparison affords proof of progressive

improvement in the application of the law. Nevertheless, it does not appear to

Suburbs of Calcutta. Bankura Ranaghat. Mcherpore Comercolly. Jamalpore in Mymensing. Daudnuggur.

Tikari. Arrah. Mozufferpore. Revilgunge. Deoghur. Patna.

be yet fully utilised. Conspicuous and regretful examples of this were seen in the towns named in the margin, where the law has been sufficiently long in force, and some of which are important Sudder Towns. In Patna, the conservancy Jemadars furnish weekly returns of births and

deaths, which are checked by the Overseers and Sub-overseers. This, although a well-meant endeavour to promote registration, does not appear to me a very good arrangement, as sweepers are not the class of men who, by education or otherwise, can intelligently and correctly perform such work. In the Municipalities in Nuddea the Commissioners have taken the responsibility of the duty on themselves, and have appointed officers to collect the statistics, instead of compelling the people to report them. On the other hand, the systematic application of the law has resulted in the detection in the Municipalities of Ranigunge, Hughli, North Barrackpore, Dacca, Naraingunge, Motihari, Monghyr, Bhagulpore, Cuttack, Hazaribagh and Chattra of a comparatively large number of evasions by the people to register the events; in the teaplanters in Darjiling having become more alive to punctual reporting of deaths occurring in their Estates, although many of them still remain unreported by the chowkidars specially appointed for this duty; in the adoption of steps in the Midnapore town to give one-fourth of the fines levied for evasions under the Act to persons reporting them.

The principal revisions under this head made during the year consisted of, (1) the abolition of Mokameh in Patna as a Changes affecting Circles of Registration. township, and its amalgamation with the rural area of the same name; (2) the absorption of the separate rural registering area of Rajarampore with that of Dinajpur; (3) the re-appearance in the Report of this year of Patna town as a registering circle, the separate exhibition of the statistics of which had to be omitted from the Report of 1885 owing to some misapprehension of its population, which was settled only in the latter part of that year; and the creation of a Municipality in Khulna and the exhibition of its statistics separately. These changes involved an increase of 132,523 in the population of the urban registration circles, with a corresponding decrease in that of the rural circles, but did not affect the total population of the Province.

BIRTH STATISTICS.

The returns show that, eliminating 1,164 still-births, there were born during 1886, in the 45 Municipalities in which Number born. records of the events were kept up, 34,734 children, in a population estimated at 1,650,855, being at the rate of 21.04 per 1,000, against 24.71 per 1,000 during the preceding year. The death-rate in the same Municipalities amounted to 28.68 per 1,000. There was thus an excess of deaths over births of 7.64 per every 1,000 of the population. This is a lamentably defective record, and consequently detailed comment on it is futile.

Of the number born during the year, 18,330 were boys and 16,404 girls, and the relative proportions which these figures bear to population and to sex distribution Births according to Sex. are—male births 11·10 per 1,000, female births 9·93 per 1,000; and male to female births 1,117 per 1,000. The corresponding proportions of the preceding year were 13·17, 11·53, and 1,142 respectively. The only noticeable feature in these results is that there was a fair improvement in the rate of male to female births recorded, the English proportion for the decade ending 1884 being 1,038 males born to every 1,000 females born.

Births according to Class or Nationality. Ratio per mille. 25.81 Number of Births. 454 24,207 Christians 20.92 Hindu 21·26 4·72 Mahomedans 10,000 10 Budhists 15.79 63 Other classes

The relative proportions in which the events occurred among the different Classes or Nationalities which compose the population of the towns under notice, are exhibited marginally. If there is any value attaching to those figures, it appears that the birth-rate was, as in former years, highest among the Christians and lowest among the Hindus, the Mahomedan rate taking an intermediate position, the other denominations being eliminated.

Towns which recorded the highest total birth-rates, excess of Births over Deaths, and approximately correct sex birth-rates.

Towns which recorded the highest total birth-rates, excess of Births over Deaths, and approximately correct sex birth-rates.

Municipalities claim notice as having approached nearest to the truth with reference to proportions born per 1,000 of population, to relative proportional distribution of the sexes born, and to the

relation which births bear to deaths:-

. (

Highest pro	portions o	f Births.	Males born t	o every 1,00	00 <i>I</i>	iema les	Excess of	Births over		ths. Rate of
		Ratio per mille.				Ratio.				ercess er mille.
Revilgunge Brahmanberia Bhagulpore Sitamurhi Gya		43·72 39·74 33·05 32·94 30·54 30·20 29·70 29·64	Hughli and Kendrapara Howral. Burdwan Chittagong Bettial. Beauleah Cuttack Durbhanga Balli Bhagulpore			1,021 1,028 1,056 1,067 1,071 1,076 1,076 1,086 1,096 1,096 1,099	Jamalpore in Bottiah Behar Bishenpur Revilgunge Bankura Monghyr Durbhanga Sitamurhi Cuttack Purulia Chittagong Utterpara	Monghyr	_	11.95 8.56 6.70 6.22 5.12 4.27 3.83 3.67 3.43 3.29 2.26 2.18
		1				1	Santipore	•••	•••	1.62

13. Returns of the events under this head were received from Govern-Births among Non-Asiatics and Mixed ment for only the three first quarters of the year nuder review. From them it appears that, 407 births were recorded, distributed into 220 males and 187 females.

DEATH STATISTICS.

14. The total population of the Province among whom the mortuary statistics considered in this Report were registered,

Areas of Residence.	Class or Nationality.
In Urbau Areas 2,409, ,, Rurul ,, 63,754,	578 Christians 101,884 Hindus 22,963,029 Mahomedans 21,361,957 Budhists 79,721 Other 0,000
Sex. Males 32,832,	

was the same as in the preceding year, viz., 66,163,884. Its distribution into sex, class or nationality, and areas of residence, are detailed in the margin. The main registering circles in which the events were recorded numbered 645, divided into 93 urban and 552 rural areas.

15. Of the population above quoted, 1,455,305, excluding 25,551 who Number and proportion of Deaths to were born lifeless, died from the diseases which Population. Were reported to have prevailed in the Province. These deaths distributed over the population indicate that the casualty-rate of the year under review was 21.99 per 1,000, which, constrasted with the rates of anterior periods, show a diminution of mortality to the extent of .75 per 1,000 in comparison with that of 1885, but an increase of 1.64 per 1,000 with that of the lustrum 1881-85.

16. The information under this head will be gathered from the mar-

a reparative mortality of the Urban and Rural Circles.

				URBAI	CIRCLES.	RUBAL CIRCLES.				
				Deaths.	Ratio per mille.	Deaths. R	atio per.			
In	1886	•••		65 773	27:29	1,389,532	21.79			
"	1885	•••	•••	72,024	81.63	1,432,721	22.42			
••	1881-85	•••	•••	72,460	80.07	1,274,372	19.98			

ginal figures. They indicate that in comparison with the results of 1885 there was a decrease of mortality in both circles, amounting to 4.34 and .63 per 1,000 of population respectively; but that contrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with those of the quintrast with

quennium 1881-85, while the urban circles exhibit a reduction of 2.78 per 1,000, the rural circles show an increment of 1.81 per 1,000; and that the experience of the entire period, 1881 to 1886, tends to the inference that the urban circles are on the whole more unhealthy than the rural, it being assumed that

better registration in the former circles does not wholly account for the large difference between the casualty-rates.

17. Mortality from the Specific Death Causes.

The marginal table affords information with regard to the fatality of the

885. ģ	I	n 1881-6	
ė			۰
Province.	Urbsn.	Rural.	Province.
14 14 79 15:75	15.08	·21	
2.81	6 13		
578	3 2·62 4 14 19 15·75 5 ·96 3 2·81	2 · 62 4 · 08 4 14 · 53 9 15 · 76 15 · 08 5 · 96 3 · 79 3 · 43 · 42 6 2 · 81 6 13	33

diseases as they are usually grouped, in comparison with the figures of the preceding year and of the immediately preceding lustrum. It shows that on the whole there was, in comparison with both the periods, decline of mortality from cholera, small-pox and bowel-complaints, noticeably so from cholera,—and that there was an increase from fever and "other causes," "injury" being in excess only over the rate of the 1881-85

quinquennium. With regard to fever, however, an important fact is disclosed by the figures of 1885 and 1886, and that is that the whole of the increase of mortality from it occurred in the rural circles, the urban circles exhibiting a very marked decrease. This indicates that these circles enjoy superior health so far as this disease is concerned, due, apparently, to the observance in them, to a greater extent, of sanitary precautions.

18. Mortality in Bengal, Behar, Orissa and Chota Nagpore.

•		Ratio	TION.		
		with			as with
	In 1486.	Difference compared 1881-86.		In 1846.	Difference compared 1881-56.
Cholera.		}	Fever.		
Orissa Bengal Behar Chota Nagpore	2'17	23 / 266 / 264 / 288 /	Bengal	17:15 16:03 12:85 8:02	*54 I 3*19 I *63 I *92 I
Small-pox.	1		Bowel-complaints.		1
Orissa Behur Chota Nagpore Bongai	111	16 D 16 D 16 D	Orissa Chota Nagpore Behar	2.81 .85 .72 .70	'24 D '88 D '10 D '08 Z

information under this head is exhibited in the margin in the order of relative severity of the diseases. It is seen that Orissa stands foremost in mortality from cholera, small-pox and bowel-complaints, and Bengal in that from fever; and that cholera is least fatal in Chota Nagpore, small-pox and bowelcomplaints in Bengal, and fever in Orissa.

19. The seasonal severity of the diseases which prevailed in the Province

Seasonal incidence of the Diseases.

			Deutlis in 1556.	Deaths in lustrum 1841-85.
First quarter			319,583	807,499
Second	•••		304,632	313,193
Third ,	•••	•••	327,233	313,381
Fourth ,	•••		503,857	412,759

is again seen to follow the law which governed its incidence during past years, inasmuch as the fourth quarter of the year again produced the greatest number of fatal results, as illustrated in the

margin.

20. Of the sexes who died, 781,385 were males and 673,920 females, the death-rate in relation to the sex population being respectively 23.79 and 20.21 per 1,000 against 22.29 and 18.44 per 1,000 during the quinquenium 1881-85. The proportionate death-rate of males to every 1,000 females amounted to 1,159 in opposition to 1,190 during the lustrum 1881-85. The mean English proportion for the years 1838-85 was 1,017. It will be seen from these figures that during the entire period under consideration the male deaths constantly exceeded the female, and that in Bengal the comparative male mortality is much larger than in England.

21. Mortality according to Age.

	Ratio tion	Ratio per mille of popula tion according to Age.					
		In 1886.	In 1982-85.				
Under 1 year	•••	138-11	106.48				
1 to 5 years	•••	26·3L	22.47				
50 to 60 years		30 71	30.65				
60 years and above	•••	51 ·79	48.50				
	•		-				
Mean for adults		14.85	14.90				

This information, as presented in the margin, indicates that the mortality except in the case of adults, was greater than during 1882-85, considerably so with regard to infants and children; but I consider this increment to be simply a sign of improving registration.

Mortality according to Class or Nationality. 22.

The events as they occurred among the different classes of the community

		Ratio per mille of popula- tion according to Class.					
			În 1886.	In 1881-85.			
Christians			13.88	13 14			
Hindus		•••	21.99	20.24			
Mahomedans			2254	20.94			
Budhists			13.34	8.94			
Other denomin	ations		15.88	16·27			

composing the population dealt with in this Report are shown marginally. The inferences to be drawn from the figures are that, of the chief nationalities, the Christians suffered the least, and the Hindus and Mahomedans almost equally during the entire period 1881 to 1886.

For the reason furnished in paragraph 13, this record represents the mortality of only the three first quarters of Deaths of Non-Asiatics and Mixed Ruces. It shows that 519 deaths (males 1886. 355 and females 164) were reported from among these classes, and that, excluding small-pox, from which no casualties occurred, 29 fell victims to cholera, 93 to fevers, 68 to bowel-complaints, 45 to injury, and 284 to other causes.

24. Vital Statistics of Calculta compared with those of the Bengal Towns.

			Calcutta	towns.		
		Ratio per mille.				
Births	•••	•••	18 06	21.04		
Mortality	from All Causes	•••	26.12	27.29		
**	Cholera	•••	4.01	4.12		
"	Small-pox		.03	.08		
15	Fevers		7.89	12.29		
,,	Bowel-complaints	١	2.90	3.77		
,,	Injury		•58	.50		
"	Other causes	•••	10.97	6.21		

These statistics are exhibited in the margin, and indicate that the returns of the Bengal towns do not compare unfavourably with those of Calcutta. With regard to deaths from diseases coming under the head of "other causes," Calcutta shows a large excess from causes explained in previous reports.

Mortality of Natives in Cantonments.

18 21

Cuttack

Ratio per mille. Ratio per mille. 29.82 Dum-Dum ... 13.97 12·88 11·52 26.85 Barrackpore ... Aliporo Dinapore ... Fort William 26.77 Darjiling 20.66 10.08

In the nine Cantonments in Bengal which were occupied by troops during the year under review, there died 33 Natives, being at the rate of 21.42 per 1,000 of their population estimated at 34,211, against 21:49 per 1,000 in the preceding year. The mortality in each Cantonment stood as indicated in the margin, and was caused by cholera at the

rate of 2.60 per 1,000 of population against 1.09 per 1,000 in 1885, small-pox at .02 against no deaths, fever 10.63 against 12.09, bowel-complaints 2.68 against 1.92, injury .43 against ·62, and other causes 5·02 against 5·76. These statistics indicate that while the death-rates from cholera and bowel-complaints were higher-particularly from cholera—those from fever and the maladies grouped under the head of "other causes" were lower-conspicuously from fever; and that, on the whole, the Cantonments were as healthy as during the preceding year.

During the year under review 23,696 European Seamen entered the PORT OF CALCUTTA-Vital Statistics of-Port of Calcutta in 1,036 vessels, against 21,449 in 948 vessels during the preceding year. The daily Sickness and mortality among European Seamen. average number present in Port was 2,326. average is the highest on record, and was due to a larger number of vessels entering into, and staying longer in, Port—the latter owing to lowness of freight. The statistics representing the sickness and mortality which occurred among the European seamen are exhibited in the subjoined table, contrasted with the outcome of the preceding year:

		In 1	886.		In 1885.			
Sickness.	Admissions into Hospital.	Deaths.	Ratio per cent. of Deaths to treated.	Ratio per 1,000 of Population.	Admissions into Hospital.	Deaths.	Ratio per cent. of Deaths to treated.	Ratio per 1,000 of Population.
In Hospital.				•	1			
Cholera	185 106 12 321 155	26 8 4 8	53.06 2.83 	11·17 1·28 1·72 1·29	16 102 116 4 104 344	7 6 1 2	43°75 5°17 26°00 1°03	8:54 :69 1:18
Small-pox Sunstroke or heat apoplexy Other diseases	4	1 34	25.00 1.81		1,179	3 21	60.00 1.48	1'77 12'40
Total	2,714	71	2.61	80.52	1,976	40	2.02	23.62
Out of Hospital.								
Cholera		1 5 1 15 15		'43 '43 2'15 '45 6'45 4'75		1 1 9 1		*59 *59 *531 *59
Total		34	4****	14 62		12		7.08
GRAND TOTAL .	2,714	105	2.61	46.14	1,976	52	2.03	30.71

The following deductions may be made from these figures, viz. that—eliminating diarrhea, from which no deaths, as in the preceding year, occurred; small-pox, which was entirely absent; simple fever, which had diminished greatly and did not, as in the preceding year, prove fatal; and scurvy, which similarly caused no loss of life during both the years under notice, and exhibited a satisfactory reduction in number admitted into hospital—there occurred some decline in the prevalence of dysentery, attended by a noticeable diminution of mortality, against a very considerable increase both in the number attacked by, and in the deaths from, cholera; a marked accession of admissions into hospital and of mortality from enteric fever; a large addition to the number treated for malarious fever, although the fatal result from this cause was not heavy contrasted with the augmented incidence of the disease; an increase in the number who succumbed to sunstroke or heat-apoplexy, taking the mortality out of hospital into account; and much increase in the number of admissions into hospital for, and of deaths from, the various maladies grouped under the head of "other diseases." The mortality out of hospital was also considerably greater: so much so as to enhance the hospital death-rate (30.52 per 1,000 of average strength) to 45.14 per 1,000, which is the total death-rate of the year, the casualties from drowning, 15 in number, taking a conspicuous part in the increment.

I agree with the Health Officer in considering the year under review to have been as favourable a one as the preceding year, if cholera is excluded

			j,	OF	PRR AVER BENG				
		YEARS.	Average strength.	Cholers.	Other diseases.	Total.			
In	1886			2,326	11.17	19:3	30.2		
**	1885 1884 1883 1882 1881	··· ··· ··· ···	***	1,693 1,684 1,860 1,792 1,350	4'13 21'8 10'8 22'8 24'0	19.4 23.7 29.6 29.0 24.0	28°6 45°1 45°5 51°8 48°0		

from the reckoning, for then the mortality from the other death causes stands at 19.35 per 1,000 of average strength as opposed to very nearly the same ratio—19.49—in 1885. Extending the examination further, it is very satisfactory to find—vide marginal figures—that 1886 was much healthier than any year embraced in the quinquennium 1881-85, as regards mortality from diseases other than cholera, and that cholera itself was markedly less fatal than during any of those years, 1885 excepted.

The official logs show that 41 deaths of Europeans occurred at sea, viz. 29 from drowning and other accidents. Deaths of Europeans at Sea. 3 from heat-apoplexy, 2 from fever, and

the remainder from constitutional and local diseases.

This information is furnished in the marginal table. The record

Sickness and mortality among the Native Floating Population.

Sickness.	otal Deaths among Native Floating Po- pulation.	of Deaths per of Population.	lumber of Native St. Ploating Population .9		otal Beaths among Native Floating Po-	of Deaths per of Population,	Number of Native Selection Floating Population Selection	arbo	
Cholera Diarrhosa Dysentory Fever - malarious Small-pox Other diseases Total		Leson National Lines	2.85 2.01 2.00 2.00 2.00 1,000	Number 108 108 109 109 109 109 109 109 109 109 109 109	21	Total 1 103	2:33 :15 :47 :11 :98 4:05	25 11 5 24 4 125 197	10 31 Deaths

manifestly defective, is taking it as it stands, it appears that, on the whole, there was no unusual mortality among the Native Floating Population, estimated at 25,409, and consisting of the crews of inland steamers and flats, of sea-going vessels, of Arab and Turkish vessels, of Maldive crafts, of country boats (whose number fluctuates according to the season of the year), and of cargo and passenger boats. Simple fever proved fatal this year while it was not so in 1885, and there was a small increase

in malarious fever mortality, and little variation in the death-rates from all the other diseases. Cholera proved fatal at precisely the same low rate as in the

preceding year—in fact lower than during any year since 1880.

29. The total number of seamen of this class who arrived in Port was 29,595, and the total who left Port numbered Health and treatment of Lascar crews on foreign voyages. The corresponding figures of the preced-28,994. ing year were 28,131 and 27,847, indicating an increase in both the arrivals and departures. The deaths at sea amounted to 30, which, calculated on the average strength afloat (8,405), yields a death-rate of 3.56 per 1,000 against 4.28 per 1,000 in the preceding year. Of these casualties, 13 were caused by drowning and injury. The regulations for the treatment of this class of seamen appear to have been properly complied with in all cases but one. The exception was that several of the crew of a vessel from Muscat were found to be suffering from scurvy caused, it was ascertained, from vegetables not having been served out to the men, the excuse being that great difficulty is experienced in pro-curing them in Muscat. Compensation was given to the crew.

The belief entertained by the majority of the local officers, based on

General Health of the Province.

view was more healthy than 1885.

Rungpore. Shahabad. Julpaiguri. Dinaj pur, Monghyr.

Dacca. Backergunge. Puri. Balasore. Rajshahye.

general observation, public opinion, the atistics, &c., is that the year under re-Of the 45 districts in the Province, one (Burdwan) was pronounced to have enjoyed exceptionally good health, and 31 average, good or fair health. Of the rest of the districts, one (Hughli) had indifferent health, and only 12, named in the margin, were said to have experienced markedly bad health. The chief cause of

the healthiness of the year was the greatly mitigated severity with which cholera and small-pox prevailed, the latter disease presenting a very remarkable diminution. On the other hand, in the districts cited above in the margin, the reason of their unhealthiness was attributed to excessive prevalence of cholera, or

Numbe	Number o districts in which the agricultural outlurn was—				price	which	the food-	tric	ts in	
Авоте втегаде.	Good.	Pair.	Equal.	Relow average.	Bigher,	Lower.	Same,	Higher.	Lower.	Same,
23	8	1	9	4	6	80	ь	5	2	38

fever, or both. It should, however, be mentioned that, although the fever mortality was higher than during any past year, the opinion largely shared in locally is that improving registration had no small share in causing an increase in the number of the deaths. No truer indication can be quoted to show that the year was a healthy one than the great fall

	i	the		. E.	RAIN	Rainfall.	
,	Prices per maund 1986,	Average prices of the	Difference in 1886.	Prices per maund 1885.	In 1836.	Average of preceding years.	
Common rice Wheat Pulses Fish	 Rs. A. P. 2 1 3 3 15 3 2 5 5 7 4 11	Rs. A. P. 2 5 2 3 9 6 2 7 8 7 3 1	A. P. 3 11 <i>D</i> 5 9 <i>J</i> 2 3 <i>D</i> 1 10 <i>I</i>	Rs. A. P. 2 8 7 3 7 8 3 7 6 7 10 2	Inches.	Inches. 64 27	

in the number of deaths in the Monghyr district in spite of the energetic and careful supervision accorded to registration by Colonel Ramsay. Another fact which accounts for the improved health condition of the people is the generally very satisfactory harvest associated with very favourable ruling prices for foodgrains—vide illustrative tables in the margin. The bountiful

7

harvest afforded ample field work to the people. It was due to the generally abundant, seasonal, and well-distributed rainfall of the year, aided, in some districts, by the fertilisation of soil following, the great inundations of the preceding year. There were exceptions to the favourable conditions above set forth, but they were not many and do not call for circumstantial detail; but there is, however, one fact deduced from the jail statistics, associated with the health status of the people, which should be noticed. It is that, of the prisoners admitted into jail and into the jail hospitals, a very large number is in bad or indifferent health, and that the greater proportion of the jail mortality occurs among these men. This affords an unmistakable indication of the low standard of health of the outside population, generally induced, no doubt, by malaria and the depressing climatic conditions of Bengal.

SECTION VI.

HISTORY OF THE CHIEF DISEASES.

CHOLERA.

Prevalence and fatality of Cholera reduction in the prevalence and fatality of Cholera in the Province.

as compared with its incidence during the preceding year, or even during the preceding decade 1876-85. This observation will be found illustrated by the following statistics. In 1886 the deaths from Cholera of 118,368 persons were recorded among a population numbering 66,163,884, or at the rate of 1.78 per 1,000. In 1885, 173,767, or 2.62 per 1,000 of the population, perished from this cause, and the average mortality of the decade above alluded to was 1.93 per 1,000. The disease attacked 21,567 villages, or 9.33 per cent. of the total number of villages in the Province against 29,239, or 12.61 per cent. in 1885, and prevailed epidemically in 72 registering circles against 101, severely in 73 against 118, with much immunity in 457 against 415, and was absent from 43 against 13.

32. In the Urban Circles there fell victims to the disease 9,935 persons, Comparative mortality from Cholera or at the rate of 4·12 per 1,000 of population, and in the Urban and Rural Circles. in the Rural Circles 108,433, or at 1·70 per 1,000. Contrasted with the outcome of 1885, the proportionate death-rates were lower in both Circles by 1·10 and ·83 per 1,000 respectively; but in comparison with that of the quinquennium 1881-85, while there was a diminution of mortality in the latter Circles of ·21 per 1,000, the former exhibited an enhance-

ment of .04 per 1,000.

33. Exceptionally high mortality from Cholera occurred in only the

Districts which suffered most from Cholera.

		itio per mille.			uti per mille.
Faridpore Balasore Puri Nuddea Jessore	•••	4·53 4·46 4·29 4·26 4·06	Cuitack 24-Pergunnahs Shahabad Dacca	•••	3·97 3·63 3·12 3·01

nine marginally indicated districts against 16 in the preceding year; and of the total number (45) of districts in the Province, 26 against 18 returned lower casualty rates, the diminution ranging from 50 to 6.13 per 1,000 of population, and the

remaining districts (19) exhibited enhancement, the excess ranging from only 01 to 2.38 per 1,000.

34. The marginal figures afford this information. The facts disclosed

Scasonal incidence of Cholera in the entire Province.

			Deaths in 1886.	Rainfall in 1886.	Deaths in 1881-85.
January	•••		9,800	.17	7,264
h. ruary	•••	***	6,172	.09	5,103
March		•••	8.755	2.24	10,550
April			18,056	-95	21,151
May	•••		9,716	6.78	18,432
June			3,585	10.74	12,391
July		•••	4.542	16.39	10,671
August			5.234	15.28	11,384
September	•••	•••	4.186	14.87	6,616
October		•••	8.054	4.76	6 336
November	•••	•••	16,090	-31	9,681
December	•••	•••	21,178	47	12,503

by them support the usual coincidence with regard to rainfall and Cholera. The heavy inundations of 1885, which kept a portion of the Province under water to a late period, had the effect of materially reducing the usual severity of the winter prevalence of Cholera in that year, and this abatement was prolonged to January and February of the year under review. The first four months of the year had a rainfall below the average of

several preceding years, but this was not followed by any marked exacerbation above the usual seasonal increase of deaths. Indeed, March, April and May have a smaller mortality than 1885, or the quinquennium 1881-85. There-

was heavy rain in May, June, July, August and September attended by a very considerably diminished mortality, so much so that June to September enjoyed unprecedented immunity (vide the deaths in the quinquennium 1881-85); but the winter prevalence of the disease was high and culminated in severity in December, which was the worst month of the year.

Cholera mortality in Calcutta and in other endemic areas.

	TOTAL MOBINEY MORTALITY FROM CHOLERA OF BIVE YEARS 1881 TO 1886.												
	January.	February.	March.	April.	May.	June.	July.	Angust.	September.	October.	November.	December.	Totals for the 5 years,
								,					
Oaleutta	511	588	1,352	2,381	1,341	619	326	235	231	436	786	1,039	9,843
Suburbs of Calcutta	727	79L	1,748	2,138	1,200	633	827	232	267	507	918	1,428	10,910
Howrah Town	174	198	421	541	41%	126	64	83	87	116	251	317	2,792
Burdwan Division	6,617	5,475	8,562	10,865	8,637	5,628	4,258	8,748	2,166	1,773	3,453	6,002	65,094
Presidency Division	13,066	8,221	19,729	32,903	15,432	3,378	1,440	1,212	1,003	3,813	9,956	18,179	128,331
Dacca Division	8,816	3,602	7,544	17,753	14,319	3,699	1,081	1,146	1,052	2,046	12,016	21,144	94,618

												
	January.	Pebruary.	March.	April.	May.	June.	July.	Angust.	September.	October,	November.	December,
Macpherson's Table, 26 years (Payne's (Table, 12 years, 1865-76	7,150	9,316	14,710	19,382	13,336	6,325	3,979	3,440	3,935	0,211	8,323	8,159
1865-76	1,955	3,226	4,848	4,658	8,306	2,231	1,818	1,684	1,543	1,805	2,789	2,176

In examining some of the figures of the endemic area, I noticed two curious discrepancies between the Presidency, Burdwan and Dacca Divisions, and those of Calcutta, its Suburbs, and Howrah. From the table given it will be seen that in areas chiefly rural there is a distinct fall of mortality in February, while in the towns mentioned this does not occur. In Macpherson's and Payne's tables of Calcutta, there is a small diminution of mortality in December compared with November, while in the quinquennium 1881-85, the reverse is the case in all the three towns and rural tracts. Taking the later figures as the more reliable, and leaving out of consideration the November-December discrepancy, which is not observed throughout all the periods, we find a very strange difference between urban and rural mortality from this disease, of which up to this time I have seen no explanation offered. It is evident, however, that in these three towns in February there are local conditions which nullify influences which are beneficial throughout the country.

36. In obedience to the orders of Government conveyed in communication No. 2328, dated the 10th August 1886, I subjoin an abstract table showing the meteorological peculiarities which obtained during defined

periods of cholera outbreaks in the Shariakandi thana in Bogra and in the town of Faridpore. Records of these observations were also kept at four other places, but they do not appear to me to be well determined, owing to their having been extended over periods during which cholera was absent at long intervals, or present only a few days, the meteorological conditions being, nevertheless, submitted for the whole period. In Chumparun the latter were taken 30 miles away from the Bettiah villages where the cholera, forming the subject of report, occurred. Moreover, the mortality is shown for months

35.

The paucity of information under this head this year is instead of for days. no doubt due to the diminished prevalence and fatality of cholera during it:-

		ž	TEMPERATURE OF			· mois	Wind.	deaths	Cho-	
Locality.	PERIOD.	Rainfall in inches.	Mean of daily maxima.	Mean of daily minima.	Eanpre.	Mean of daily al. mois- fure 100 being satura- tion.	Direction.	Mean velocity -miles per	Total of Cholera recorded.	Daily average of lera deaths.
EAWA	Accession. 14 days, from 8th to 21st October	0.62	88.2	75.7	12.7	78'2{	Calm 8 days N. 4 days E. 2 days	} 84-2	51	8.6
Shabiakandi thama in Bogra.	Culmination. 48 days, from 22nd October to 8th December.	•••••	83.6	63.7	19*9	70.7	Calm 83 days N. 12 days S. 1 day E. 2 days	} 27.4	859	7:5
SHARIA	Decline. 23 days, from 9th to 31st December	, .	77'8	55'8	22.0	63.2	Calm 6 days N. 12 days S. & E. 5 days	} 23·1	55	2.4
TOWN.	Accession. 25 days, from 13th March to 6th April.	0.49	90.1	76.1	13.5	64-1	N. E. 5 days N. W. 7 days S. & S. W. 13 days	}260-6	71	2.8
FARIDPORE	Culmination. 14 days, from 7th to 20th April	0.02	92.8	78'1	19.8	61.4 {	N. E. 2 days S. & S. W. 12 days	} £34·4	90	7.0
FAR	Decline. 17 days, from 21st April to 7th May	0.74	96-3	73.6	22.8	68.8	E. &S. W. 4 days S. E. 8 days S. E. 5 days	}225.0	8	*5

The figures shown in the table for the Shariakandi thana in Bogra refer to two places. The meteorological observations were made in the head-quarters station of the district, from which Shariakandi is 12 or 15 miles distant. The figures for Faridpore town, both as to meteorology and disease, are for the town only. In Shariakandi the outbreak of cholera was part of the winter exacerbation of the disease common to Lower Bengal, and its culmination is associated with diminished temperature, increased range of temperature, diminished humidity and less wind velocity, while a continuation of the same conditions for 23 days from 9th to 31st December was attended by a decline of the disease. Throughout the whole period of accession, culmination and decline, there were many calm days, and the north-east monsoon was estab-There was also little rainfall, and that only during the period of acces-In the Faridpore town the disease appeared during the spring, the time of greatest prevalence of the disease in Lower Bengal, and during its accession the mean maximum and min turn temperature and daily range do not differ very widely from those found at the beginning of the outbreak in Shariakandi, but the difference in humidity is very considerable and of wind velocity very Culmination was attended by mean temperatures not very widely differing from the time of accession, but the range was 5.9° greater and wind velocity decreased. A slight fall in temperature, increased rainfall, increased range of temperature, and increased humidity with diminished wind velocity characterize the 17 days of decline. Throughout the whole period the south was the prevailing wind with easterly and westerly components, and the rainfall was light.

The whole question, however, has already been exhaustively considered by Drs. Lewis and Cunningham in their admirable treatise on "Cholera in relation to certain physical phenomena," published at the office of the Superintendent of Government Printing, Calcutta, 1878; and I am not sanguine that the method of inquiry enjoined is likely to throw much light on the etiology of the disease, or do more than "to indicate the extremely complex nature of the questions to be determined." We already know the condition which foster the disease, and what the Sanitary Department requires is more power and more money to nemove them, leaving to savants to puzzle out the problem of causation, while

in the moantime we save useful lives.

The orders of the Government of India, Home Department, No. 398, dated 29th October 1878, paragraph 5, sanctioning Cholera prevalence as delineated by the request of this office to exhibit in the Cholera the Cholera Map. Map the distribution of the disease in each subdivision in the Province instead of in each thana or registering circle, having been abrogated recently in favour of the latter mode, I have arranged with the Assistant Surveyor-General to have a map of Bengal prepared, showing the boundaries of the thanas, and on a scale which will admit of the cholera statistics being exhibited in it as desired.

This information is furnished in the subjoined table. It shows that very little cholera occurred during the year under Cholera at Fairs. review at these public gatherings in Bengal. This immunity while due, to a great extent, to the greater care taken in the observance of sanitary precautions generally, is no doubt associated with the general decline in the prevalence of cholera during the year. That the adoption of sanitary precautions is of great value is evidenced by the facts that, although cholora was very prevalent only 20 miles from the Baruni mela in Munshigunge, the fair was very slightly affected; that the outbreak of cholera in the Sonepore fair in Sarun is attributed to the difficulty which was felt in preventing promiscuous squatting owing to the immensity of the gathering, and that in the Santipore fair it was due to the pilgrims being compelled to resort to the sides and banks of the river for defecation, as no sites for the construction of latrines were available owing to the flood from the river not having subsided. Nevertheless, we find from the reports that the number of fairs is not small in which, while no sanitary measures were adopted, there were no outbreaks of the disease:--

			Fairs when	Duration	Number		RA PRE- BNCK AIMS.	Were sanitary	
DISTRICTS. Fairs where held.		Name of Fair.	beld.	of Fairs.	present at Pairs.	Cases,	Deaths.	adopted at Fairs ?	
Burdwan	Agradip	Not stated	March	3 days	35,000	Few	Not stated.	Yes.	
Hughli {	Tribani Tarkessur Diamond Harbour Santipore	Baruni Churukpoojah Gunga-Sagor Rash- <i>meld</i>	April { January November	1 day 8 days 1 week 7 days	25,000 100,000 100,900 40,000)	7 1 13 Not	1 1	Do. Do. Do.	
Nuddea { Dinajpur	Nobadwip Ranisunkoil {	Not stated Nekmurd	Ditto April November	16 ,,	10,000 } 250,000 140,000	Not many.	Not Stated. 13	Do.	
Dacca Sarun Hazaribagh	Munshigunge Sonopore Madhuban	Baruni Madhuban	January October Not stated	Not stated, 20 days Not stated		stated. 8 29 2	None 14	Do. Do. Not stated.	

The local Reports show that, with few exceptions, no cholera occurred among pilgrims or travellers passing through Cholera among Pilgrims. The noticeable exthe districts in Bengal. ceptions are cited below. It should, however, be mentioned that in a few districts the introduction of the disease into them s referred to importation by pilgrims. Notices of these cases will be found interspersed in the following pages of this Report devoted to the illustration of the incidence of cholera in districts; but an examination of the histories of these cases also shows that, on the whole, the theory advanced is not conclusively supported by the facts.

In the Puri district cholera broke out along the pilgrim routes. In the Puri town there occurred during the Car festival from the 1st to the 26th July 187 deaths, and it appeared that most of the cases of the disease came from Julsichawra, six miles from the town. Only a few cases of cholera occurred among the pilgrims who passed through the Cuttack district on their way to Puri. This is considered to be very remarkable, because they suffered this year great hardship and privation during their journey, in consequence of the disorganization of the steamer and boat service on the Kendrapara canal, caused by the breach in the Mohanuddi anicut, by which the depth of water in the canal was much reduced, and the steamers and boats were prevented from running beyond short distances. The pilgrims had thus to be crowded in the boats and steamers, and were landed at various distances from Cuttack, to which they had to find their way by road without frequently being able to obtain suitable food on their journey. In the Rungpore district some of those who were attacked by cholera at the Aluakhaua fair held in Dinajpur, died in the district while they were proceeding to their homes. In Burdwan a

few cases of cholera occurred among the pilgrims who were proceeding to their homes in Kalna from the fair held in Santipore in Nuddea. Three hundred and sixty-nine pilgrims were admitted into the Gurbetta and Dantoon Dispensaries in the *Midnapore* district, of whom 36 died, 4 from cholera and the rest chiefly from bowel-complaints.

40. The main facts connected with the incidence of cholera in the districts are subjoined. To avoid lengthening the report, I purpose to employ only so much statistical information as will be found absolutely necessary to illustrate the observations of the local officers and my own. Notices of the districts where the mortality from cholera was insignificant, and of those regarding which nothing of importance is available for record, will also be omitted.

BENGAL.

41. In Bengal Proper 76,144 persons fell victims to cholera, in 14,448

Mortality from, and Seasonal incidence of Cholera in the Bengal Division of the Province.

villages, and the death-rate in relation to its population, numbering 35,073,770, was 2:17 per 1,000. Con-

trasted with former periods, there was a decrease in deaths of 6,238, equivalent to 17 per 1,000 of population as compared with 1885, but an increase of 1,834

deaths, or '06 per 1,000 as compared Deaths. Rainfall. Deaths. Rainfall. with the quinquennium 1881-85. Next to Orissa this division of the 1,053 17·46 801 17·13 654 15·24 8,190 ·15 July January ... August September October 4,578 6,426 February07 Province suffered the most. 2.93 March ... 3·48 ·18 seasonal distribution is shown in the April ... 16,069 1 53 2,267 7,209 7,822 1,474 9.02 November May margin in association with rainfall, December 19,601 and exhibits the following aspects.

From January to April, when the rainfall was low, amounting to 4.68 inches, the mortality was comparatively high, April exhibiting very great exacerbation, so much so as to render it the most unhealthy month next to December. With the unprecedentedly great rainfall during May to September, aggregating 71.69 against 62.81 inches the average of preceding years, there occurred a sudden and steady decline in the numbers of the casualties. The severity of the disease revived in October, increased greatly in November, and culminated in virulence in December, which was the most unhealthy month of the year. During this period the rainfall amounted to only 3.71 inches. From the above facts it is apparent that Bengal experiences two seasons of high prevalence of cholera, viz., the hot and winter months, and that it enjoys much immunity from it during the height of the rains. All the divisions composing Bengal Proper, presented, on the whole, the same features; but there were some district variations, notable instances of which will be mentioned hereinafter.

42. BURDWAN DIVISION.—The returns of this division presented

1.31 9,748 deaths, or at the rate of 1.31 per 1,000 of its population estimated at 7,393,954, against 2.61 per 1,000 in 1885 and 1.78 per 1,000 in the lustrum 1881-85. The percentage of villages pervaded by the disease was 6.98 against 10.30 in 1885. These figures indicate a considerable decline both in point of diffusion and fatality. The contributions towards this mortality by the

six districts composing this division Ratio per Ratio per are exhibited in the margin in order mille. mille. of severity. Contrasted with the out-... ·88 ... ·74 ... ·46 come of the immediately preceding Burdwan Il wrah micnapore ... 1.84 Hughii and Serampore 1.38 Birbhum lustrum, all these districts, excepting Bankura Midnapore, returned decreased mor-

tality to the extent of Birbhum 1.81, Burdwan 1.51, Bankura .72, Howrah .28 and Hughli .07 per 1,000 of population. Birbhum, Burdwan and Bankura, which presented the largest reductions in mortality, also exhibited the greatest diminution in the extent of prevalence of the disease, the percentages of villages pervaded being less by 16.37, 13.47 and 3.32 respectively. Midnapore experienced a higher death-rate, but by only .04 per 1.000 of population, and an extension of the disease to 1.60 per cent. of its villages. The salient points,

submitted in the local reports, connected with the history of cholera in the above-named districts, worthy of record, are the following:—

43. Burdwan. - The Magistrate is of opinion that the water-works served to a remarkable extent to diminish the virulence of cholera in the Burdwan town, the death-rate having fallen from 6.25 in 1885 to .64 per 1,000 this year; but I think it is too early to pronounce an opinion, especially as the town may have simply shared in the general abatement of the disease in the district, as there was a reduction of mortality in every registering circle, notably in the Kalna and Ranigunge town, and in the Burdwan, Bood-Bood and Cutwa thanas. In the Bankura district also every registering circle suffered less from the disease, most of them considerably so, the Sonamukhi town showing no deaths and the rural circle of the same name presenting the insignificant death-rate of '01 per 1,000. This is the more remarkable, as these circles as well as Indas, where also the mortality was very low—25 per 1,000—are admitted to be the worst localities in the district in point of sanitation, and were the hotbeds of the disease in 1885. It was noticed that the greater severity of the disease, mild as it was, was confined to the thanas (Bankura excepted) situated in the northern and eastern parts of the district, while in the southern and western parts it prevailed less severely. The Assistant Surgeon has shown clearly that the bulk of the cholera of this year occurred in localities far removed from the pilgrim routes. He notes that while cholera was prevailing in the town and district, and new prisoners from all the infected localities were daily admitted into the jail, not a single case of the disease occurred in it, and from these facts he concludes that human intercourse has nothing to do with the propagation of cholera. In the **Birbhum** district the disease is believed to have been imported by pilgrims on their way home from the shrines at Baidyanath and Gya and the river Ganges, and that in the Ramporehaut thana it was introduced by a man from Calcutta. The details furnished in support of these statements are deficient. It is most important to trace the carriage of the disease from the shrines to the infected localities, and this has not been done. In my Report for 1884, in which the subject was fully discussed, it is shown that pilgrims do not import cholera, and the causes why they are attacked and die have been explained, which, briefly summed up, are exposure, hardship, bad food and water when travelling. Midnapore was the only district in the Burdwan Division, where an exacerbation of the disease, with regard to both extension and fatality, occurred. To this enhancement 16 out of the 29 circles in the district contributed, notably the Raghunathpur, Contai, Khagri, Nundigram, Gurbetta and Dantun thanas, which returned excesses of mortality amounting to 5.45, 2.73, 2.09, 1.78, 1.51 and .92 per 1,000 of population respectively. It is stated that cholera appears to be increasing in the district, and that this year its severity was felt to a much greater extent than during the six preceding years; and the cholera statistics of the district

un	uumig	OILC	DLA	In cocar	ng years; and the choice standing of the distiller
	_			Number	bear out this statement, vide marginal figures. Dr.
				of deaths.	Tomes, the Civil Surgeon, characterizes the cholera
In	1886			4,632	of this year "as an excessive manifestation of
	1880			1,97G	endemic disease, not as an epidemic." On the sub-
		•••			to a call the survey and a street of the following the surface to the surface of
	1881			2,999	ject of the importation of the disease by pilgrims, he
	1882	•••		8,460	makes the following observations which have been
	1883	•••		3,766	
	1884	•••		3,876	supplemented by my own remarks. Of the thanas
	1885	•••	•••	3,608	(Raghunathpur, Contai, Khagri, Nundigram, Gur-

betta and Dantun) above mentioned, Dantun and Gurbetta, which returned death-rates of 2·15 and 2·22 per 1,000 of population, are traversed by pilgrims, but so is Salbuni, which escaped, as in 1885, with very slight mortality—·14 and ·20 per 1,000. To Salbuni I would add Debra, Midnapore, Keshpur, Panchkura and Narainghur, which are also on the pilgrim routes, but returned the comparatively low death-rates of ·49, ·66, ·87, 1·26 and 1·74 per 1,000. Again, of the other severely-affected thanas—Raghunathpur, Contai, Khagri, and Nundigram—which bore the greatest burden of the cholera mortality of the year, Raghunathpur, and also Egra which also returned a comparatively high death-rate, viz. 2 per 1,000 of population, are not on the pilgrim routes. Enquiries made by the Civil Surgeon also go to show further, that the pilgrims themselves were not attacked by the disease to a greater extent than

usual, and that the disease was more prevalent in the villages away from the pilgrim roads than in those lying on it in which the pilgrims lodged. Hughli including Serampore.—In this district cholera prevailed most during the fourth quarter of the year from the same influences which caused an increase in Calcutta at the same time; but this enhancement does not represent an epidemic, but only an exacerbation of an endemic disease. Very exceptional mortality from the disease occurred only in the urban and rural circles of Hughli and in the town of Serampore, where the casualty rates amounted to 5·13, 7·24 and 7·62 per 1,000 of population, respectively. To the severity of the disease in the Serampore town, the Rishra village contributed to no small extent. Here 51 cases of cholera attended with 25 deaths occurred in the cooly lines belonging to the Hastings Jute Mills Company, and the village itself was severely affected. Cholera is an annual visitant of the Rishra busti, including the Hastings and Wellington Jute Mills, as will be seen from former reports. According to Mr. Ritchie, the Sub-divisional Officer, this locality is a breeding-ground of the disease. It is chiefly occupied by coolies. The land belongs to Government (khos mehal lands) but it has coolies. The land belongs to Government (khas mehal lands), but it has been farmed out to the Mill proprietors, who in their turn have let it to others, and the latter enjoy large rents by letting out the huts, constructed by them in the lines, to coolies. Some of these lines are terribly overcrowded, and the huts are ill-construct and hardly raised above the ground, and the natural drainage is intentionally obstructed. The coolies, as well as the other busti people, are filthy in their habits, their food is unwholesome, and they are altogether indifferent to sanitation. To check these outbreaks, Mr. Ritchie suggests that a clean sweep of the lines be made, that the land be drained and new lines erected, the cost being met primarily by the Mill proprietors, secondarily by Government, who gets a large rent from the lands, and thirdly by the Municipality. But it is difficult, it is said, to carry out these suggestions, and the Municipal Commissioners are helpless in the matter, owing to the above land and also the similarly unsanitated Mohes busti being Government property leased out to private parties. It appears, therefore, that in order to grapple with the gross insanitary conditions prevalent in them, the lands should be held under a lease by the Municipality, and that, consequently, Government interference in the matter is indicated. As proofs of what good sanitary measures are capable of effecting, the following may be cited:—Cholera, which is a frequenter of the Champdani busti in the town of Baidyabati, the coolies being the chief victims, was altogether absent from it this year, and this is ascribed to the busti having been placed in a good sanitary condition, a supply of filtered water supplied, and a new road through the busti and latrines, &c., Again, only a base cases of the disease occurred among the coolies employed on the Hughli Bridge Works, as good huts and temporary latrines were provided for them, and a Native Doctor was in attendance. The general history of cholera in the Sub-division of Serampore is as follows:-Sporadic cases of the disease were reported from different parts of the Sub-division throughout the year, but it assumed epidemic proportions in November. In all 1,100 cases of the disease attended with 710 deaths were reported. Several outbreaks occurred, but chief among them is the one which took place in October in the Rishra, Chatra, Serampore and Connagor wards of the Serampore Municipality, which gradually spread over the whole town, and then extended eastward and westward, affecting all the towns on the west bank of the Hughli river from Utterpara to Bhuddressur, and also many villages in the Chunditola, Haripal and Singhoor thanas. During this outbreak 659 persons were attacked, of whom 399 died. The disease was looked upon as endemic, and not referable to importation.

44. PRESIDENCY DIVISION.—In this division 25,213 persons Incidence of Cholera in the Presidency Division. Were carried off by cholera, or at the rate of 3.24 dency Division. per 1,000 of its population, numbering 7,771,693, and 21.05 per cent. of its villages were affected. The corresponding figures of past periods were—in 1885 deaths 22,787; death-rate 2.93; percentage of villages attacked 20.22—in lustrum 1881-85, deaths 25,666; death-rate 3.30. It appears, therefore, that in this division the disease prevailed somewhat more extensively, and that the mortality exceeded that of 1885 by 31 per 1,000 of

population, but was below that of the lustrum 1881-85 by '06 per 1,000. The

Ratio per mille.	Ratio per mille.	five districts embraced by this division presented the mortality
Nuddes 4.26 Khulua Jessore 4.06 Murshidabad 24-Pergunuahs 3.68 Murshidabad	1·59 1·41	shown in the margin. Of them Jessore and 24-Pergunnahs exhibited in comparison with the

lustrum 1881-85 higher casualty rates, the excess amounting to 91 and 37 per 1,000 of population, while Murshidabad, Nuddea and Khulna returned diminished fatal results, the diminution consisting of 1.11, 76 and 74 deaths per mille of population. The extended prevalence of the disease above alluded to occurred in the Jessore and 24-Pergunnahs districts, where excess percentages of villages, represented by 7.86 and 4.55 respectively, were overrun by the disease. The history of cholera in these districts, as deduced from the local reports, is subjoined.

tory of cholera in these districts, as deduced from the local reports, is subjoined.
45. 24-Pergunnahs.—The noticeable feature exhibited by cholera this year in this district is that the suffering during the last quarter was unprecedentedly great, as 2,867 deaths occurred during October, November and December against only 2,079 during the remaining nine months, December alone returning 2,217 casualties. Of the local outbreaks the following claim attention:—In the Suburbs of Calcutta some abatement in the severity of the disease was perceptible, as the death-rate fell from 8.68 per 1,000 of population, the mean of the immediately preceding lustrum, to 7.33 this year. The mortality, it will be seen, was still very high. The disease did not appear to have been confined to any special locality, but was distributed, to a more or less extent, over all the wards of this Municipality. Its sevity in the last quarter attracted public attention, and special steps were ta en to arrest its progress, among which were the appointment of four Assistant Surgeons to treat the affected from house to house, and of extra coolies and mehters to attend to the conservancy, and the employment of disinfectants largely. The insanitary conditions obtaining in this important Municipality, which favour the propagation of the disease, having been often exposed in my previous annual and other Reports, I need not recapitulate them here. Legislation is in progress to amalgamate the Suburbs with the Town of Calcutta. When this is accomplished, there will be some valid hope of improvement. Similar conditions obtain in all the many municipal towns in the 24-Pergunnals district, and outbreaks of cholera in them were numerous and some of them severe. The most so was the one in the North Barrackpore Municipality in the village of Garulia, in which the coolies attached to the Dunbar Cotton Mills live. The Agents addressed the Government on the insanitary state of the town, which, as directed, I inspected. The sanitary state of Garulia was even worse than that of Rishra in Serampore. There was not a sweeper employed throughout the whole town, which is on the bank of the Hughli, just above the intake of the Calcutta water supply. The mortality was 8·15 per 1,000. The appearance of the disease in Baraset, in the South Suburban Municipality, in Goberdanga, and in North Dum-Dum town is in all instances attributable to the same causes. All the towns in this district have received careful attention from the officers of the Sanitary Department, but their recommendations have, in most instances, been attended by little The Deputy Sanitary Commissioner advised the Commissioners of Baraset to set aside tanks for drinking water-supply. They urged that bathing was as necessary as drinking. The Commissioners of Baduria declined to interfere with the "time-honoured custom" of the Mahomedans of burying their dead within their homesteads, which is a universal custom almost in all the towns in the 24-Pergunnahs, with the exception of Calcutta, which buries its Mahomedan dead in the Suburbs. Municipal administration in all these towns is very inefficient, and the money raised by taxation often misdirected. Diamond Harbour sub-division it was noticed that some villages situated on the main lines of communication by rail with Calcutta were affected by cholera, and it was therefore believed that the disease was imported. The relation between cholera and water supply is well illustrated in the following passage which occurs in the diary of Assistant Surgeon Umesh Chandra Ghose, Deputy Superintendent of Vaccination, 1st Metropolitan Circle. In Kulaydanga, a village in thanah Hosseinabad, 20 persons died of cholera, among its population numbering 891, within 19 or 20 days. There are three tanks in this

village from which the villagers take their drinking water. All of them are covered with weeds. The first case occurred in a house situated on the bank of one of these tanks. The man died without any treatment. Five surviving of one of these tanks. The man died without any treatment. Five surviving members of the family were subsequently affected and died in a few days, and 14 more deaths occurred among the villagers who drank the water of this Careful enquiry on this point by the Assistant Surgeon convinced him beyond doubt that the 20 persons who died of cholera in this village used to drink the water of one and the same tank; that the first case occurred among those who lived on the side of this tank; and that the disease did not occur among those who drank water from other sources. Another instance supporting the same view is furnished by the same writer in connection with a representative cholera-stricken bari (home) in the Harwa thana. "The bari is situated in the midst of a bamboo jungle. On its three sides there are three ponds, two of which are shallow and have become receptacles of stagnant water and decomposed bambos leaves, and in one of these jute was steeped. The third pond is comparatively deeper, and is situated just behind a cook-room, on the back wall of which is a hole through which rice water and all sorts of refuse are thrown on the side of the pond. There are some tamarind trees on the side of this pend with overhanging branches, and the leaves as they dry fall on the water. The water has in fact become green. I could not stand on the side of this tank without putting my handkerchief to my nose. The water of this tank is used for culinary purposes." Nuddea.—This district occupied the fourth position in the list of the most severely

n 1886 ... 426 cholera-stricken districts. Its statistics, marginally furnished, show that the disease is established here, and has a very high prevalence varying very little from year to year. It has two periods of exacerbation, viz. during the hot months in March, April and May, and the cold season in November

and December, and the Magistrate observes that its severity varies directly with the fish-supply and inversely with the water-supply. After the inundation subsides and dries up, rotten and tainted fish becomes the favourite food of the masses, and it is then that cholera prevails to an alarming extent. During the periods of severe prevalence of the disease the wells and tanks run low, and their water becomes stagnant and unfit to drink, but is drank. has been also the experience of the year under review, and to these causes another is added, viz. carelessness in the disposal of cholera evacuations. outbreak of cholera which occurred at the Rashjatra mela in the Santipore town in November is said to have been carried to the town of Kishnaghur, and to have prevailed severely until he cod of the year; and another which broke out at the fair held in the Nobadwap town was said to have lingered in that town for two months. The towns in this district returned very high deathrates from cholera:—Nobadwip 6.80 per 1,000, Meherpore 5.06, Kanaghat 3.68, Kishnaghur 3.16, Santipore 2.32 and Kushtea 1.13. I feel persuaded that this high prevalence of the disease is associated with the existence in these towns of very large numbers of well-privies, most of which are never cleaned, some covered with a layer of earth when full, and in others, notably in Santipore, the process is to dig a pit by the side of the existing full one, and to transfer the contents of the latter into the former and to cover with earth. Cholera prevailed much more severely in the **Jessore** district than during the preceding year, and it exhibited epidemic proportions in January and again The Civil Surgeon notes that the usual insanitary conditions existed wherever the disease prevailed—filth, foul air, impure water, ill-constructed and ill-rentilated nomesteads, unwholesome or insufficient diet being the chief factors in the production of the disease. Of local outbreaks one of a virulent type occurred in village Sham Kunda in thana Moheshpur, and was referred to the filthy habits of the lower classes of people among whom the disease usually prevails with marked severity. A large number of villages in the Sudder, Narail and Magurah sub-divisions, and village Kotechandpore in the Jhenidah sub-division, also suffered similarly. Want of good drinking water, obstruction of drainage, uncleanliness, &c., are quoted as having caused the outbreaks. Murshidabad experienced a favourable cholera year.

exceptional outbreaks of the disease, one is reported to have occurred in the Berhampore town, attended with a mortality of 6:48 per 1,000 of population, and another in villages Kalgram and Sabooni in thana Kandi. In the latter the disease is said to have been imported from Nuddea, where some of the villagers had gone on a pilgrimage and returned affected; in the former the disease received the attention of the Magistrate and Municipal Commissioners.

46. RAJSHAHYE DIVISION.—Of the population of this division Incidence of Cholera in the Raj. numbering 7,734,733, 13,574 died of cholera in 2,012 villages, representing a death-rate of 1.75 per 1,000. Compared with 1885, there was a decrease in the percentage of villages invaded by the disease of 3.89 with a decline in mortality of .64 per 1,000; but in contrast with the quinquennium 1881-85, there appears to have been an increase in the death-rate of .16 per 1,000. The mortality returned by

the seven districts comprising Ratio per Ratio por this division is given in the marmille. mille. gin in the order of fatal results. Taken individually, they show, as compared with the outcome Bogra 1 31 Rungpore ... 2.92 2.46 Rajshahye .78 ... ••• Julpaiguri ... Darjiling ... 2.28 Dinajpur41

of both the periods above-mentioned, a decline in both extension and fatality in Dinajpur, Rajshahye and Bogra, against an enhancement in Rungpore, Pubna, Darjiling and Julpaiguri. In point of diminution in mortality, Rajshahye achieved the highest reduction in comparison with both periods, viz., by 5.00 and 2.59 per 1,000 of population, and in point of increment Rungpore, viz., by 2.04 and 2.02 per 1,000 respectively. The histories of the incidence of

cholera in these districts are subjoined.

47. As was the case in Bankura so in **Dinajpur**, thanas Porsha and Patnitolla, which had high mortality from cholera in 1885 (11·11 and 2·48 per 1,000 of population), enjoyed entire immunity from it this year, while all the other registering circles, excepting Thakurgaon and Ranisankail, exhibited considerably reduced fatal results. There was one notably severe outbreak. It occurred in April among the coolies on the Railway line, and was attributed to the large and indiscriminate consumption of new rice and other similar articles irritant to the stomach; to filthinoss, defectaion being carried on near the banks and in the bed of the river; and to dead bodies with the clothes soiled with cholera excreta being cast into the river. It is said that the removal of these conditions had the effect of speedily stamping out the disease; but that the coolies, in absconding, spread the disease to different parts 12 miles along the Railway line. There was more cholera in the **Rungpore**

			ntio por mille.				R	atio per mille.	district than in any year since 1877, vide marginal figures. It
In 1886	•••		2.92		1881	•••	••	1.21	was of a severe type, but did
,, 1877	•••	•••	64		1883	•••	•••	.84	not attain epidemic proportions
,, 1878	•••		1.65		1883			1.01	
,, 1879	•••	***	148	,,	1884	•••		' 55	owing, mainly, to the people liv-
" 1880	•••	•••	02	,,	1885		•••	88	ing scattered in hamlets rather

than in over-crowded villages. It was wide-spread in the sub-division of Gaibanda, in which the bulk of the mortality occurred, amounting to 6.00 per 1,000 of population distributed between its thanas of Bhowanigunge, Sadullapore, Sundergunge and Gobindgunge in the proportions of 12 92, 7.95, 6.86, and 2:30 per 1,000 respectively. It was localized in a number of villages in the sub-division of Kurigram, but here only 3.63 per 1,000 of the population With regard to than Sadullapore, the Magistrate reports that the whole of its northern portion is exceedingly unhealthy; that the population is dying out, and the rich lands are rapidly reverting to jungle; and that cholera breaking out among such a plague-stricken people as they are, is sure to carry off a large number of them. I myself saw the dwindling away of the population seven or eight years ago. As cattle disease-rinderpest, &c.prevailed very largely along with cholera, it is suspected that the latter was propagated by the consumption of the diseased meat of such cattle by the Mahomedans who form 70 per cent. of the population; and the Medical Officer is doubtful whether such cases can be called cholera or poisoning by diseased meat. With regard to the causation of the disease generally, the Civil Surgeon, Dr. Dutt, notes that most of the affected villages receive

their water-supply from small streams traversing them, which are polluted with all kinds of filth and become stagnant from silt or other impediments; that this evil was intensified by the moderate rainfall of the year; and that putrid, fœtid fish and diseased meat are largely consumed. These he considers to be subsidiary causes of the disease. The consumption of putrid fish and meat explains the excessive prevalence of bowel-complaints, most of which are put down as cholera. In opposition to the Civil Surgeon's statement that cholera is referable to the small streams having silted up may be quoted the Magistrate's report to the effect that there were most unusual floods this year; that churs were submerged which had not been so since 1877; that all the rivers overflowed and nearly the whole of thana Sadullapore was inundated, and that when this inundation subsided the cholera But, from personal observation I know that some river-beds are levelling up and ceasing to act as drainage channels or sources of good water-supply. following observations of Dr. Dutt clearly indicate that cholera is not propagated by inter-communication or importation, particularly when it is considered that they apply to a year during which the disease was unprecedentedly fatal and widely spread. "Almost all the places where the disease was very prevalent were remote from the railway and other important lines of communication either of trade or of pilgrimage, a fact which bears on both the years 1885 and 1886; while such centres of population and trade as Saidpore and Rungpore escaped with 3 and 12 cases respectively." The very high death-rate from cholera of 4.59 per 1,000 of population in the Sheriakandi thana in the **Bogra** district was traced by the Civil Surgeon, Mr. Blaker. by personal investigation, to the hardships to which the people were subjected in manufacturing jute fibre and to drinking the water in which the jute was steeped. He found that the villages, situated mostly in the north and north-east of the thana, were well scattered and not at all crowded, and the country low and very damp and to a great extent under water to a depth of several inches; that they were entirely surrounded by rotting jute ponds; that the people, poor in physique and ill-nourished, were working in these ponds half immersed throughout the day in water, while the other half of the body was exposed to a hot sun, and frequently drinking the polluted water of the ponds to quench the thirst created by the heat and exertion; that there were also kutcha wells, situated in close proximity to the jute ponds, from which drinking water was taken; and that it was suspected that the dead were buried in the vicinity of the dwellings of the people. On the other hand, he noticed as a very remarkable fact, that in the villages in the west of this thana, where the land is higher and drier, and where little or no jute cultivation is carried on, there was not a single case of cholera. In rubna the incidence of the disease, which was high, was not localized but general throughout the district, and each outbreak was severe at its commencement and abated gradually afterwards. The town of Pubna and thanas Dulai, Pubna, Mathura, Chatmoher and Shazadpur, comprising the greater portion of the district, exhibited death-rates of 6.87, 6.94, 3.09, 2.84, 2.13 and 1.30 per 1,000 of population respectively. The town is in an insanitary condition, as will be seen by a reference to Appendix V to this Report, and it was noticed that during the epidemic the men deserted their homes leaving the women, and that a curious, but pernicious, custom obtained in it, viz., that the people used to throw the cholera excreta into holes dug in the rooms and verandahs of their houses, in utter ignorance of the danger of the process. If this practice has been a long standing one, it may account for the periodical prevalence of cholera in this town, if the germ of the disease can lie dormant and subsequently revivify. There was considerably more cholera in the **Darjiling** district than during the preceding two years, but the greatest portion of it was confined to the Kurseong thana, which returned a death-rate of 5.82 per 1,000 of population. The Darjiling rural circle escaped the disease entirely, and the Civil Surgeon characterizes the three casualties returned for the Darjiling town as sudden deaths with vomiting and purging in the Bhutia busti, which were ascertained to have been caused by the consumption of rotten fish by the sufferers a short time before the attack. Julpaiguri, after enjoying great immunity from the disease during the preceding two years, suffered very considerably this year. In fact the

epidemic incidence of 1883 was repeated this year. Originating in the Falacotta and Salbari thanas, the disease spread gradually over the whole district,

affecting most the thanas named in the margin, Salbari suffering at the Ratio per mille. Ratio per mille. 12.66 Alipur ... Mynaguri ... Salbari 2.89 highest rate after escaping entirely in Keranti 8.45 2.66 1885. Some of the tea gardens were also attacked severely, and in one the deaths numbered over 200. Contrary to the experience of the preceding year, the disease prevailed least during the months of heaviest rainfall and became epidemic after the monsoon, rendering its winter severity most marked. The usual insanitary conditions are put forward as accounting for its prevalence, viz., impure water, tainted atmosphere, crowded dwellings, damp soil, imperfect drainage, unhealthy occupation, and undue exposure to climatic changes. To these is added the following as fostering the disease. It has been the practice in this district for generations past to store fish during the rains in large openmouthed vessels for the preparation of a paste for consumption, as a staple article of food during the winter, the odour of this preparation being most But it should be remembered that a similar practice exists in unbearable. Burmah and other places.

48. DACCA DIVISION.—In this division 23,975 deaths from cholera were recorded in 17.80 per cent. of the villages against 13.49 per cent. in the preceding year, and the mortality stood at 2.75 per 1,000 of the population,

aggregating 8,700,939, against 1.84 per 1,000 in 1885 and 2.17 during the lustrum 1881-85, indicating that the disease was more widely diffused and more fatal.

The four districts comprising Ratio per mille. Ratio per this division returned the deathmille. ... 2·34 ... 1·59 4.58 Mymensing ... Backergunge... rates exhibited in the margin, Faridpore ... 3.01 and of them Faridpore, Dacca and Mymensing experienced severer, and only Backergunge less mortality than during both the preceding year and quinquennium, the excess being represented in Faridpore by 2.38 and 1.90 per 1,000 of population respectively for the two periods, in Dacca by 1.49 and .83 per 1,000, and in Mymensing by .59 and .88 per 1,000, and the diminution in Backerganj by .50 and 1.30 per 1,000. Separate accounts of the prevalence of the disease in these districts follow.

There was a very considerable accession of cholera in the Dacca district. Brought over, as usual, from the preceding year, it was present during this year in every month, June to Soptember showing very little of it, but December exhibiting great intensity when it spread to nearly every thana, specially Munshigunge. The experience of the past seven years with regard to the behaviour of the disease is repeated, viz., that in years of low flood cholera is not unusual in August, September and October; but that when the country is inundated it practically disappears, only a few sporadic cases occurring in the higher lands; and that as soon as the drying up process commences its severe phase is again observable, which increases in intensity until the country is fairly dry. Of local outbreaks one occurred in virulent form in November in thana Lalbagh or Keranigunge, causing the high mortality of 5.51 per 1,000 of population during this month and December, particularly in the latter, and spreading widely over the whole of the subdivisions in the district. In connection with this outbreak the Civil Surgeon observes: "In my experience it is hopeless to expect villages to adopt any prophylactic measures whatever. They will persist, in spite of all our efforts, in drinking foul water, even if they are in a position to obtain river water; and to expect them to boil or filter water, to clean a drain, to leave an infected spot temporarily, even to drink prophylactic doses of acid sulphuric dilute if given them, (as is issued daily to every convict), is utopian. Issue sulphur and direct them to burn it in their houses and near the bed of a cholera patient and it will be done so long only as it is done for them. In short, it is impossible to help people who obstinately refuse to help themselves or even to meet you half way towards it." Cholera was also specially virulent and fatal in the notoriously unhealthy sub-division of Manickgunge. Comparison is also instituted between the extremely mild prevalence of cholera at the Baruni mela at the height of the cholera season

and among a vast assemblage of people, and the severity of the disease which was raging at the same time only 20 miles off in the Munshigunge thana. At the fair every sanitary precaution was observed; in the latter locality little or nothing obtained. On these facts the Civil Surgeon observes that the "outbreak of cholera at one or other place was determined by its sanitary condition, and this bears out the generally received opinion as to the value and importance of sanitary measures." Faridpore did not only exhibit considerably increased prevalence and fatality of cholera as compared with the preceding year, but was the most severely inflicted district in the whole Province. Excluding four, all the other circles in the district 14 in number) returned higher death-rates than during 1885, and of them in Faridpore town and in Belaikandi, Goalundo, Faridpore, Bhusna and Bhanga rural circles, the suffering was pre-eminently great, as 17.34, 14.63, 13.47, 11.50, 7.18 and 5.92 per 1,000 of their populations, respectively, fell victims to the disease. In the Faridpore town the local schools had to be closed during the period of the culmination of the disease, and the people were advised to, and about half of them did, leave the town for a short time, and sanitary measures were adopted by the Municipality for the mitigation of the disease, towards the cost of which, it is gratifying to find, some of the respectable residents contributed. A few facts connected with this outbreak are cited by the Civil Surgeon in illustration of the non-communicability of the disease and the efficacy of the adoption of sanitary precautions. Here the first case of cholera occurred in the person of a woman on the 25th February. She died the next day, and after her death her house was thoroughly cleaned and leeped, and, on the Civil Surgeon's advice, who personally visited the place her clothing and bedding were burned; her house was fumigated with sulphur; and the floors, where the cholera matter was ejected, were swept, and the sweepings buried. Nothing was heard of the disease after this till the 14th March, when it broke out again and raged with great fatality for a month and three weeks. With regard to cholera in the Backergunge district, the Assistant Surgeon in charge, Babu Kunja Lal Sanyal, is of opinion that rainfall had nothing to do with its prevalence or subsidence. But the cholera statistics do not support this view of the matter, for they show that the rainfall from January to April amounted to 6.69 inches, that of May to September 73.02 inches, and that of October to December 5.35 inches, while the mortality from January to May and during December, when the rainfall was small, amounted to 1.17 and 28 per 1,000 of population respectively, whereas that from June to November, when the rainfall was excessive, was lowest, aggregating only 11 per 1,000 of population. There was much increase of cholera in the Mymensing district, and its incidence, it is stated, followed the same course as in former years. Of local outbreaks, that which occurred in the sub-division of Kishoregunge, particularly in the sub-divisional head-quarters and in Baitman was of a virulent type and in the sub-divisional head-quarters and in Bajitpur, was of a virulent type, and lasted during the first five months of the year, carrying off during this period 3.32 per 1,000 of the population against 18 per 1,000 during the remaining seven months. This outbreak was attributable, the Civil Surgeon thinks, to bad water, bad food, and imperfect sanitation. It is, however, suspected that deaths from diarrhea and dysentery were returned as having occurred from cholera.

50. CIIITTAGONG DIVISION.—Of the population in this division, Incidence of Cholera in the Chittanumbering 3,472,451, 3,634, or 1.04 per 1,000 gong Division.

5.661, or 1.63 per 1,000 of the population died in 1,206 villages, and during the lustrum 1881-85 the deaths amounted to 4,191 or at 1.20 per 1,000. The comparison indicates a sensible diminution both in the area pervaded by the disease and in fatal results.

					atio per mille,	The three districts comprising the division furnished the death-rate exhibited in the margin, and of them
•	Tipperah Noakhalli			•••	2.15	Chittagong and Noakhalli returned considerably
					.42	abated mortality, but Tipperah an increment in
	Chittagong		•••	• • •	•01	comparison with both 1885 and the lustrum 1881-85,
1	the abate	me	nt be	ing	repre	sented by 1.57 and 1.07 per 1,000 of the population
i	in the Ch	iitte	gong	g dis	strict,	and 1.01 and .36 per 1,000 in Noakhalli, and the
i	ucremen	t b	yັ∙38ັ	anc	1 463	per 1,000 in Tipperah in contrast with the two period

Noteworthy facts connected with the prevalence of the disease in in question.

these districts are subjoined.

In Chittagong the disease was, if the records can be trusted, conspicuous by absence. It attacked only four of its 14 circles, causing in them very low death-rates, ranging from .009 to .13 per 1,000 of population, the last figure being returned by the Chittagong town, and the total mortality was considerably lower than during any year of the proceding decade excepting 1881, which year returned the same death-rate as the year under review. In Noakhalli also the fatality of cholera was very low; but here only one circle, Hattia, enjoyed complete immunity from the disease, while thanas Ramgunge and Begungunge and the Sudharam town suffered most, returning death-rates of 1.59, 1.07 and 1.56 per 1,000 of population. Thanas Ramgunge and Begumgunge are low and swampy, much more liable to floods than the southern part of the district near the sea, and the water-logging is great and the drying up process slow. The water-supply of Begumgunge was found to be bad by the Assistant Surgeon, who also, when investigating into an outbreak, found many cases of dysentery and diarrheea classed as cholera. Tipperah did not share in the great freedom from cholera enjoyed by Noakhalli and Chittagong. Here more than half the district suffered severely, notably the Brahmanberiah and Comillah towns and the Comillah and Daudkandi rural circles, where the death-rates amounted to 11.68, 6.29, 3.45 and 3.16 per 1,000 of population respectively. The disease also prevailed in the Sudder jail, causing the death of 6 per cent. of the average strength of the prisoners. Of local outbreaks those which occurred in several villages in thana Muradnugger and in the Chandina and Daudkandi thanas were referred to the use of the filthy and polluted water of old tanks and drains overgrown with aquatic plants and weeds and fouled in other ways.

BEHAR.

In the Behar Division of the Province cholera caused 25,709 deaths in 3,254 villages among a population estimated at Mortality from, and seasonal incidence 23,127,104, or at 1:11 per 1,000. In the preceding of Cholera in the Behar Division of the year 65,663 deaths or at the rate of 2.83 per 1,000 of population were registered in 7,824 villages, and in the preceding quinquennium 40,615 deaths, or 1.75 per 1,000. The comparison consequently points to a consi-

	EAST	BEHAR.	====:		WEST BEHAR.						
	per 1,990 of	mortu	Difference in mortality as ompared with		72-0	per 1,090 of	Difference in mortality as compared with		percentage of d by Cholera ith 1885,		
DISTRICTS (BHAGULPUR DIVISION.)	Ratio of deaths population.	1885.	1981-85.	Difference in perc vilages attacked as compared with	PISTRICTS (PATIA) DIVISION.)	Ratio of deaths population.	1885.	1831-85.	Difference in per vilages attacked as compared with		
Monghyr Bhagulpore Yurneah Maldah Southal Pergunnahs.	-38 -54 1:34 -18 -16	2:68 D 2:67 D 23 D 5:99 D 3:14 D	1 12 D 1·22 D • 12 D 2·13 D 1·16 D	13:18 <i>D</i> 14:84 <i>D</i> 3 85 <i>I</i> 20:75 <i>D</i> 12:87 <i>D</i>	Gya Shahabad Mozufferpore	1:82 2:29 3:12 :82 :70 :88 :55	**************************************	*07D	1:97 D 4:13 I :02 I 13:77 D 2:98 D 5:07 D 7:01 D		
Total	.28	2.547	1.01%	11.737	Total	1.39	1.55D	'45.D	3.67 D		

derable reduction in both the diffusion and fatality of the disease. The cholera statistics of the 12 districts embraced by it are given in the margin in contrast with the outcome of the anterior periods above alluded to, and they indicate much improvement, on the whole, in both East and West Behar, both with respect to mortality and to area pervaded by the All the disease.

districts, individually considered, show a reduction of mortality during the whole period under comparison excepting Patna, Gya and Shahabad,—Maldah and Mozufferpore exhibiting the most substantial diminution, and next to them Chumparun and Sonthal Pergunnahs. In seasonal fatality, the usual law was, on the whole, followed, in so far that the disease commenced to exhibit severity. in April, to progress in activity, month by month, synchronous with the increase of rain-fall, and, as a rule, to diminish as the cold season approached; but in 1886, instead of showing considerable abatement in November and Decem ber, it prevailed with markedly unyielding virulence, inasmuch as during

these two months over 38 per cent. of the total mortality occurred, November exhibiting 28 per cent. and being the worst month of the year. The disease disclosed the same features in all the districts in Behar, excepting Mozufferpore, Durbhanga, Monghyr, Bhagulpore, and Sonthal Pergunnahs, where all the months, excepting October, November and December, were months of great freedom, and Maldah, where January and December only exhibited marked exacerbation, thus corresponding mainly with the incidence of the disease in Bengal. Particulars in relation to the prevalence of the disease in each of the above named districts follow.

DIVISION.—There was much less cholera in BHAGULPORE the Monghyr district than during any year Incidence of Cholera in the Bhagulpore (East Behar) Division. of the preceding decade (1876-85), excepting All its circles returned considerably lower 1880. mortality than in 1885, notably the Jamalpur and Monghyr towns and the Jamalpur rural area, where the death-rates fell from 19.61, 6.24 and 11.18 per 1,000 of population to 147, 1.44 and 4.79 per 1,000 respectively. In the Kharackpur and Sekundra thanas the casualties were nominal, amounting to .03 and .07 per 1,000, and the Shaikpura town returned no deaths. The ·03 and ·07 per 1,000, and the Shaikpura town returned no deaths. Jamalpur town has hitherto been very subject to cholera, but it is hoped that the new water-supply with which it has been provided will tend further to Bhagulpore also experienced the same immunity improve its health status. from cholera as Monghyr, excepting that 1880, 1881 and 1883 were healthier years. All its 13 circles returned lower mortality, the fatality in Banka, Katuria, Madhupura and Kissengunge lying between 02 and 08 per 1,000 of population and the Bhagulpore town only exhibiting noticeably high mortality, viz., 4.57 per 1,000. It is, however, to be hoped that the water-works, which will be opened during the current year, will check this preventible loss of life; but to do so, the supply must be extended to all parts of the town, an undertaking which, it is feared, cannot at present be achieved owing to paucity The increase of mortality which occurred in the Purneah district was contributed to by only six (Arrareah, Kissengunge, Matiary, Dhamdaha, Bahadurgunge and Kaliagunge) of its 14 circles, of which the three first named furnished conspicuously high death-rates, viz. 5.66, 2.08 and 2.06 per 1,000 of population respectively. The disease was chiefly confined to, and was most fatal in the Arrareah sub-division, but it was sporadic in character and The difference between Arrareah and the other scattered over the area. sub-divisions where cholera did not flourish to the same extent, is the naturally high and dry position of the former situated in the north-west of the district, which precludes its being subjected to the floods of the Kusi river, while a great porton of the others is swampy, and was well submerged by inundation which was the highest this year since 1872, the rainfall having been unusually excessive. Both the Maldah and Sonthal Pergunnahs districts escaped the ravages of cholera markedly. In fact, the deaths returned by them were considerably lower than during any year of the preceding decade, 1880 for the Sonthal Pergunnahs excepted. In *Maldah* the immunity from the disease, which was shared by every circle (the mortality in them, ranging from only 009 to 89 per 1,000 of population), is attributed to the high flooding of the rivers, which took place in September and October and submerged the greater portion of the district, and which both the Civil Medical Officer and the Magistrate look upon as very beneficial. In the Sonthal Pergunnahs noticeable outbreaks of the disease were reported from the Deoghur town and the Pakour rural In the former, which was the only circle which returned a high death-rate, viz. 5.74 per 1,000 of population, it broke out twice—once in March among pilgrims from Birbhum, and again in September among others from Gya. The Civil Surgeon refers the outbreaks to importation, but the particulars furnished do not support his statement. The subject, however, does not call for further discussion, having been examined and the true inferences arrived at—ride my Annual Report for 1884. In Pakour the prevalence of the disease was attributed to the fifthy habits of the people; and in opposition to the views on the subject entertained in Maldah, to decaying vegetation after the floods from the Ganges.

PATNA DIVISION.—In the Patna district the disease assumed Incidence of Cholers in the Patns epidemic proportions in June, and continued to (West Behar) Division. prevail with more or less similar virulence up to the end of the year. This is unusual, as its severe phase commences earlier and ceases in October; but it should be observed that the rains were prolonged into October, the falls of that and the preceding month amounting to 6.22 and 12.13 inches respectively, as opposed to 3.11, and 6.85 the normal average. Exceptional mortality occurred only in the Patna and Dinapore towns and in the Dinapore and Bickram rural circles, which returned the casualty-rates of 5.76, 3.38, 4.41, and 3.57 per 1,000 of population respectively. The occurrence of a high death-rate in the Patna town is not surprising, as its sanitary condition, particularly with regard to conservancy and drainage, is very defective. The whole of the drainage of the chowk is now impounded among dwelling-houses, and there are innumerable well-privies polluting the water-supply. For further details regarding this town, Appendix V to this Report. The outfall of the chowk is, however, to be made pucca throughout in 1887-88. In Gya, although the incidence of cholera was severer than during the preceding year, it did not on the whole prevail epidemically. It was observed that the mortality caused by the disease was greatest during the rains, and continued to November, which was the most unhealthy month of the year, the rain-fall having been prolonged into October in which month it amounted to 7.75 inches. Of local outbreaks the following may be quoted. In the town of Gya, where the mortality was excessive and the highest in comparison with other circles, amounting to 9.41 per 1,000 of population, a severe outbreak occurred in September and October among the pilgrims who assembled in large numbers at that time, but the disease disappeared on their leaving the town for their homes, the general population not suffering much. prevailed very badly in the Ruffegunge and Des villages in thana Aurungabad, in the Tikari and Bela villages in Tikari, and in the Kooatha village in Jehana-The death-rates in these than were the highest next to Gya town, viz., 3.22, 4.35 and 3.76 per 1,000 of population. In the two first named villages the disease is said to have been imported, and to have lingered for a long time owing to the density of the population. It should be noted that 121 deaths from cholera and 44 from bowel-complaints occurred in the 500 lodging-houses for pilgrims in this district. In **Shahabad** cholera prevailed with much severity. It appeared in its severe phase later than usual, that is in July instead of in May, and prevailed most severely in October The mortality, amounting to 3.12 per 1,000 of popuand November. lation, was greater than that of any of the preceding ten years, 1876 and 1883 excepted, during which years, however, it was almost equal, viz., 3.83 and 3.24 per 1,000. Although prevalent throughout the district, its severity was conspicuously felt in the Peru and Dhangaon thanas and in the Buxar town, where the casualty rates stood at 7.18, 5.10, and 6.39 per 1,000 of population. The provalence of the disease was attributed to excessive humidity of the soil, resulting from an almost unprecedently heavy rain-fall (56.11 inches against 40.98, the normal mean average), and from the sub-soil water-level having in some parts of the district been permanently raised by the canal system. Mozufferpore, Durbhanga —In both these districts the mortality from cholera was very low, and in both the behaviour of the disease in relation to seasonal severity was identical. The year was characterized by comparative absence of cholera, during the usual Behar cholera season; that is, in the rains, and for its presence in the severest form, in November (when in ordinary years it almost disappears) and December. During this period the disease was wide spread all over the district. In Durbhanga however, there was a noticeable exacerbation of the disease in June, but it was confined to only four thanas. The Magistrate of Mozufferpore mentions that an extraordinary and unprecedented inundation kept the disease down, and both he and the Civil Surgeon assert that after the people. had returned to their homes from the great Sonepur fair, where many cases of cholera occurred, the disease spread over the district. There appear to have been two inundations—one in August following a rain-fall of 16.73 inches in July and 15.49 inches in August, and another in October after 14.56 inches in

September and 5.20 inches in October. These inundations were very extensive and in parts every kutcha house collapsed, and they may have had the effect of delaying the period of cholera prevalence and so establishing a coincidence in time between it and the breaking up of the Sonepur fair; but it would be unwise to ascribe the increase of cholera severity to the fair as has been done. In Durbhanga, after the considerable rain-fall of July, August and September, during which 46.53 inches of rain were recorded, and consequent flooding and water-logging, the disease gained in strength, so much so that the fourth quarter of the year was, excepting the month of June, the worst period. Dr. Gilligan, the Civil Surgeon, asks why cholera should prevail most during the cold weather when the tanks, wells, and water-courses are full, and the water in them is comparatively pure. He is inclined to believe, although admitting that cholera is the cause of many and most of the deaths. although admitting that cholera is the cause of many and most of the deaths returned under that head, that many of the events occur from what is really only acute bilious diarrhoa due to chill caused by the water-logged condition of residential surroundings. It was noticed that the largest number of deaths occurred among the very young and very old, and it is stated that the disease, which prevailed in epidemic form in the town of Somashtapur in the Tajpur sub-division, was attributable to the use of the filthy water which had accumulated in hollows. Sarun, Chumparun.—Both these districts experienced very considerable immunity from the ravages of cholera, particularly the latter, and all the circles in them shared this exemption, to a more or less extent, excepting Manjhi and Digwara in Sarun, which exhibited higher mortality than in 1885. Nevertheless, while in Chumparun not a single circle exhibited exceptional death-rate, in Sarun the towns of Revilgunge and Sewan suffered severely, the casualty rates in them amounting to 5.76 and 3.53 per 1,000 of population. It was, moreover, observed that many of the villages in the Bettiah than ain Chumparun, which were the least affected last year, suffered most this year, and that after three alleged importations of cholera in the Motihari town in the same district it did not spread.

ORISSA.

55. This division suffered at a higher rate from this death cause than Mortality from, and seasonal incidence any other division in the Province In it the of Cholera in the Orissa Division of victims to the disease numbered 15,175 in 3,651 willages, or at the rate of 4·18 per 1,000 among its population of 3,628,832. Contrasted with the occurrences of 1885, the percentage of villages overrubly the disease was lower by 5·38, and the mortality exhibited a dimination of 1·09 per 1,000 of population; but in comparison with the events of the lustrum 1881-85, there was an enhance-

ment of mortality to the extent of ·23 per Ratio per mille. 1,000. The three districts composing this divibule.

Balasore ... 4.46 sion furnished the casualty rates exhibited in Puri ... 4.29 the margin in the order of severity. Comparison with 1885 and the lustrum 1881-85 shows that Cuttack and Puri, while furnishing reduced mortality as compared with the former period, exhibited enhancement in comparison with the latter,

the former period, exhibited enhancement in comparison with the latter, the diminution being represented by 1.77 and 1.69 per mille of population, respectively, and the increment by .23 and .80 per 1,000; and that Balasore exhibited the opposite features, viz., increment as compared with 1885 and decrease as contrasted with 1881-85, the former amounting to .75 and the latter to .31 per 1,000. In seasonal distribution the disease did not as in former years manifest high severity throughout the year, as August to October were months of great exemption from it. January to May experienced great suffering, particularly March, which returned the largest number of deaths during the year. During June there was a marked abatement; July exhibited considerable exacerbation, and November and December comprised a second period of high suffering, December being the most unhealthy month after March. Taking the districts individually, in Balasore the behaviour of the disease was the same as described above; but in Cuttack the period of

exemption commenced and expired one month earlier each way, and in Puri May, June, September and October were the only months of freedom, and July was the worst month and next to it November and December for reasons which will be explained hereinafter. In Orissa the rainy season set in in May and lasted into October with a total fall of 59.54 inches, and during this period 4,916 deaths occurred; from January to April 4.04 inches of rain fell and was attended with 6,811 deaths; and November and December yielded 3.09 inches of rain, and during these months 3,448 casualties took place. These data clearly indicate that, whatever part pilgrimage may take in the incidence the disease, deficient rain-fall is intimately associated with its accession in Orissa as in Bengal. The principal features exhibited by the disease in these districts are subjoined.

56. ORISSA DISTRICTS.—The disease, although it prevailed with abated intensity in the Cuttack district, exhibited much severity in local incidence, but it did not assume epidemic virulence anywhere. The Dhurman

assume epidemic virulence anywhere. The Dhurmsala thana returned under head cholera nearly one-third of its total mortality for the year, the death-rate from this cause amounting to 8.38 per 1,000 of population, and the Aul (8.77 per 1,000), Patamundi (8.16), Kendrapara (4.18), and Jajpur (3.66) thanas, and the Kendrapara town (6.62) were also conspicuously affected. In these thanas lie the principal roads traversed by the pilgrims on their way to and from Puri. This fact inclines the Civil Surgeon to believe that most of the deaths occurred among the pilgrims, and that they communicated and spread the disease to neighbouring villages. But these routes traverse the district from north to south and east to west, so that they affect the greater part of the district, and I think the Civil Surgeon approaches nearer the truth when he associates the exciting causes of the disease to (1) the highly contaminated and impure water which travellers drink from dirty tanks, or even pools by the way side; (2) the fatigue and exposure of travelling by which the system is brought below par, and becomes an easy prey to the disease; and (3) the irregular meals and indigestible nature of food consumed, such as cucumbers, melons and crude fruit, parched corn, stale sweetmeats, and other similarly objectionable edibles. He adds that the insanitary condition of the lodging-houses and the germs of the disease left in them by provious occupants are also causes of its spread. In November cholera broke out among the coolies working in the canal at Hookytollah, which spread and passed on to a ship in harbour. The Civil Surgeon visited the locality and found several insanitary conditions obtaining in it. The huts of the coolies were ill-constructed; very low, so much so that there was not standing room in them, even in the centre; ill-ventilated, and over-crowded. The conservancy arrangements were defective, there being no sweepers; the huts were filthy; cesspits existed; the people resorted for defectation to the beach and jungle close by; and the drainage and liquid refuse soaked into the sand. The water-supply also was bad, the wells water being brackish; and fresh water was scare, and had to be brought from Jumbo a distance of eight miles. It was apprehended that this ovil would be intensified in the hot weather when more coolies would be employed, and when there would be a greater demand for water and greater risk of contamination. The incidence of cholera in the and greater risk of contamination. The incidence of cholera in the Puri district resembled that of Cuttack in point of reduction and severity, but it was noticed that it appeared suddenly in places far apart from each other, and disappeared as suddenly to re-appear at other places. In seasonal fatality, however, it followed the same course as during preceding years; that is, it became generally more active and fatal during the three periods when pilgrims flocked into the district to attend the three great festivals held in the town of Puri, and that it abated considerably in severity when the pilgrims were absent. The periods referred to are February and March when the Dole jatra was held; July when the greatest of the festivals, the Buth jatra was calabrated and when there is a very large addition to the Ruth jatra, was celebrated, and when there is a very large addition to the population of the town (about 80,000) and the mortality is greatest; and the Panchak festival which took place in November. I need not, however, recapitulate here the oft repeated conclusions drawn from these facts. They will be found in the Reports of former years; but it is important to note that the present Health Officer of the Puri town does not support the importation

theory like his predecessor, and ascribes the prevalence of the disease to the same conditions to which the pilgrims are subjected as furnished by Dr. Stewart of Cuttack. Although every circle returned considerably lower mortality, the suffering was pre-eminently great in the urban and rural areas of the Puri thana, where 25.13 and 6.48 per 1,000 of the population died from this cause. In the town there occurred 187 deaths among pilgrims during the car festival, and it appears that most of the cases came from Julsichawra, six railes from the town. The Magistrate ordered the encampment there to be broken up, and it is said that immediately this was effected, the outbreak The usual precautions were taken in the district and town to arrest the progress of the disease, and, in addition, two food Inspectors were appointed in the latter to examine the food prepared for sale to the pilgrims, and the space for each pilgrim in the lodging-houses was increased from 18 to 24 square feet. Nothing can be deduced from the cholera returns of Balasore with regard to the influence of pilgrims in spreading it, nor do the local reports furnish any account of the cholera in this district. But it is noticeable that while the whole district forms a pilgrim route from one end to the other, with, perhaps, the exception of Baliapal, this than asuffered more than Jullasore

and Soroh through which the Ratio per mille. Ratio per mille. Grand Trunk Road runs from 2.79 Dhamnuggur 9.73 Soroh Midnapore to Cuttack, and that 6.81 ... 1.65 Jullasore Dhamnuggur, which is only touched by the above road at its north-west corner, suffered most-vide marginal figures.

CHOTA NAGPORE.

57. This division suffered the least from cholera. The casualties amounted Mortality from, and seasonal incidence of Cholera in the Chota Nagpore Division of Bengal.

to only 1,340, or at the rate of :30 per 1,000 among its population numbering 4,334,178, the area invaded by the disease being 214 villages. In 1885 there died 6,582 persons, or at the rate of 1.51 per 1,000 of population in 926 villages, and during the lustrum 1881-85, the deaths numbered 2,772, or at :63 per 1,000. The statistics of the four districts composing this division are mar-

			Ratio per mille 11.		or decrease	ginally exhibited. Of these, only Lohardugga presented greater preval-
			1896.	1885.	1881-85.	ence of the disease and higher mortality
Lohardugga	•••		•67	·20 I	·47 I	in comparison with both the preceding
Manbhum		•••	•13	1·53 D	·90 <i>D</i>	
Hazaribagh		•••	08	3·27 D	1.00D	year and lustrum, but not to a notice-
Singbhum	•••	•••	•02	·58 D	·23 <i>D</i>	able extent. In seasonal severity the
lam of fo				hid. · '	··· ·	hata Namona Tuna to Assess Lain

law of former years was abide by: Chota Nagpore, June to August being the most unhealthy, and September to December, including April and May, the next unhealthy months, while January to March were months of great freedem. Associating rain-fall with mortality it is seen that in Chota Nagpore, as in Behar in ordinary years, the largest number of casualties takes place during the rainy season. The noticeable features in relation to the prevalence of the disease in these districts are the following.

58. CHOTA NAGPORE DISTRICTS.—The mortality from cholera this year in Hazaribagh, Singbhum and Manbhum was lower than during any year of the past decade, excepting 1880 for Manbhum.

In the Singblum district the only other notable fact is that the closure from use of one of the tanks situated in Madhubazar in the town of Chyelassa, a locality which is noted for frequent outbreaks of cholera, was followed by the cessation of the disease, forcibly indicating the value of a good water-supply as a preventive of cholera. In Lohardugga almost the whole of the disease was confined to the Palamow sub-division in which Garwah, Hosseinabad, and Daltongunge suffered the most, returning death-rates of 9.23, 2.42, and 1.24 per 1,000 of their populations respectively, while all the circles in the Sudder sub-division, excepting the urban and rural areas of Ranchi, escaped the disease, these two areas returning the low casualty rates of .05 and .12 per 1,000 respectively. The prevalence of the disease in the Palamow sub-division is referred, contrary to the law in Chota Nagpore, to insufficient rain-fall during April, May and June, the outbreak commencing in

June and lasting up to September. It is mentioned that Garwah and Hosseinabad being situated at the extreme north-west of the sub-division bordering on Rewah could not be visited by the Civil Surgeon, and for this reason the Deputy Commissioner suggests that a senior and experienced Medical Officer be posted at Daltongunge, the head-quarters of the sub-division.

Cholora in the Port of Calcutta. Among European Scamen.

During the year under review 49 European scamen were admitted into the hospitals for cholera, and of this number 26 died. In addition there occurred one death out of hospital. The average strength of seamen in Port being 2,326 the death-rate of the year

from this cause amounts to 11.61 per 1,000. Contrasted with former periods, it is seen that this mortality, although higher than in the preceding

Average Ratio per Strength. 1,693 1,684 1,860 1,792 mille. 4.13 In 1885 " 1884 " 1883 19.8 ,, 1882 1,350 240 ,, 1881

year, was much lower than during any of the other years of the quinquennium cited in the margin. It appears that the disease after having prevailed mildly in the town of Calcutta till September began in that month to exhibit greater severity and to have assumed wider proportions in Novem-

The Port population was consequently simultaneously affected, having in common with the town population enjoyed much immunity from the disease during the period of exemption. In fact, cholera was the only disease which rendered the Port more unhealthy than in 1885.

The Native Floating Population in the Port furnished 59 deaths from 60.

Among the Native Floating Popula-

cholera, or at the rate of 2.32 per 1,000 of population estimated at 25,409. This mortality was precisely the same as that which was recorded in

the preceding year, but considerably below the average of the quinquennium 1881-85, which stood at 3.92 per 1,000.

SMALL-POX.

A pleasant feature in the Sanitary History of the year under review is the very marked reduction in the prevalence and Extent of prevalence and fatality of fatality of the loathsome disease Small-pox, as compared with its incidence not only during the preceding year, but also during

					Percentage	Number	NUMBER OF CIRCLES			
Рвијор.			Number of deaths.	Ratio per mille.	of villages attacked by Small- pox.	Affected more or less severely.	From which Small-pox was absent.			
In 1886			4,049	•06	-97	5	330			
In 1885	•••		9,863	*14	2.12	18	272			
., 1884	•••	•••	18,533	*28	2.00	53	224			
1883	•••	•••	9,714	14	1.78	30	284			
, 1882	•••	•••	18,651	*20	2.87	1 33	280			
1881			24,371	*86	4:37	43	218			
7 7 1144			22,953	*34	4.86	54	241			
1879	•••		22,843	*34	4.08	77	171			
, 1878	•••	•••	12,410	-18	3.09	80	206			
p) 10/0 ···	•••	•	8,088	12	2.04	22	255			
,, 1877 ,, 1976	•••	•••	10,746	•16	No data.	80	206			
p, 1510	•••	•••					حست. تصسم			
Mean of t 1876-85	he de	ecade 	15,317	-23	3.10	39	235			

all the years of which there are any records. The marginal figures, embracing the decade 1876-85, on the statistics of which some reliance can be placed, illustrate this Extending observation. the enquiry further, note that in 30 of the 45 districts in the Province the mortality from this lower—in cause was several cases consider-

ably so-than in any year of the decade above mentioned, and that with regard to the remaining 15 districts, where higher mortality is seen, the excess is not, in most cases, great. From Bogra no death was returned. Moreover several Medical Officers have reported—some from personal observation—that many of the cases returned as small-pox were caused either by measles, mild eruptive fevers, or pulmonary complaints. This being the case, the already low death-rate of the Province from this cause must really rank lower. great immunity from the ravages of the disease which the Province enjoyed this year is no doubt intimately associated with the systematic carrying on and extension of Vaccination within recent years. This subject will again beconsidered in the pages of this Report devoted to the narration of the History of Vaccination in Bengal; but I may here observe that 55 per cent. of the smallpox mortality occurred in the seven districts of West Behar, to only two of which vaccination has yet been extended from want of establishment, and 31 per cent. from the district of Chumparun.

62. This information is embodied in the marginal table contrasted with that of the decade 1876-85. The figures Urban and Rural Circles. with that of the decade 1876-85. The figures indicate that throughout the period of comparison

the urban circles suffered more Ratio per mille. Deaths in-1876-95. from small-pox than the rural. 1876-85. 1886. 1886. This is singular, considering that 204 1,602 Urban Circles 3,845 .21 18,715 ·08 the Compulsory Vaccination Act is in force in the majority, and inoculation is not practised in any of them, at least publicly. The only inference, therefore, is that vaccination is neglected. or that the provisions of the Compulsory Enactment are not properly and fully utilized, in very many of them.

63. The circles, individually taken, also naturally enjoyed the same Localities of severe prevalence of exemption from small-pox as the districts as wholes, small-pox. for it is found that only five of them (named below) against 18 in the preceding year returned noticeably high death-rates from the disease—

Towns.		1	RURAL CIRCLES.				
		Ratio per mille.			Ratio per mille.		
Daudnuggur in Gya	•••	2.12	Adapore in Chumparun	•••	2.32		
Dumraon in Shahabad Sitamurhi in Mozufferpore	•••	1·45 1·14	Motihari in ditto	•••	1.55		

64. In relation to this point the experience of former years is repeated by the year under review, inasmuch as the hot months of March to June were the most unhealthy, as they again returned the largest number of the casualties, viz., 2,431 against 1,618 during the remaining eight months of the year.

65. The statistics under this head have for years past shown that the Mortality from Small-pox among largest proportion of the mortality from small-pox occurs among infants and children. This year is no exception to the rule, as 74 per cent. of the total mortality from this cause was borne by them. Reckoned on population, the mortality of infants

	Des	Proportion per cent. to total mortality.	per 1,000. I regret I am unable to furnish the death-rates in relation to population under
Under 1 year	9	372 24.00	the death three in relation to population under
			the other ages, for while understanding orders
1 to 6 years	1,8		
G to 12 years	4	198 12-29	on the subject deaths from small-pox are
Total under 12 ye	ears 2	991 73.87	recorded at the ages marginally mentioned, the
tomi under 15 J			census of the population has been taken at the

ages from 1 to 5 and 5 to 10 cars instead of from 1 to 6 years and 6 to 12 years.

Chief particulars relating to Small-pox in the Districts.

66. A few points referring to the incidence of small-pox in districts claiming attention are subjoined.

Bankura.—It was observed that the neglect of vaccination for four years in certain villages in thana Bankura resulted in a smart outbreak of smallpox in them. In Midnapore, although the Panchkura thana suffered the most this year, it returned only 10 deaths against 73 in the preceding year. An outbreak of the disease in thana Gungarampore in the Dinajpur district which spread over 18 villages was traced to infection. There were no deaths from small-pox in the towns of Comillah and Brahmanberiah, and only eleven in the rest of the district of Tipperah. This immunity is attributed to the introduction in 1883-84 of vaccination into the whole district. Shahabad is another district in which the utilization of vaccination during only two years has resulted in a sensible decline of mortality. In the Sonthal Pergunahs district the largest amount of small-pox occurred in the Sub-divisions of Rajmahal. It prevailed most severely in the Damun among the Paharias who are averse to vaccination. In the Puri district the largest number of deaths from the disease was returned from Khurda thana, viz., 47 out of the total for the district of 92.

67. Small-pox was absent from the **Port of Calcutta** both among the Incidence of Small-pox in the Port European seamen and Native Floating Pepulation; but four steamers with pilgrims from Mecca arrived in Port with the disease on board, one, a German ship, concealing the disease.

FEVER.

68. The statistics illustrating the prevalence and fatality of Fever in the Prevalence and fatality of Fever.

Province during the year

5,	and the second					population.	s affected.	CHARACTER OF PREVALENCE— Number of Circles in which the disease pre- vailed		
Periods.					Number of deaths.	Ratio per seille of	Number of villeges affected.	With greatest virulence.	With less activity.	Normally.
In 1886					1,057,296	15 97	149,905	24	150	471
In 1885					1,042,142	15.75	147,675	24	154	469
1884	•••	•••	•••	•••	966,233	14.60	147,466	29	116	504
1883	•••		•••	***	913,760	13.81	142,781	27	130	491
1000		•••	•••	***	929,943	14.06	184,812	58	109	477
,, 1881		•••			940,911	14.23	141,976	218	167	289
1000		•••	•••		689,605	10'48	129,045	124	112	437
1970	•••	•••	***	***	622,260	9.41	118,970	89	105	479
1070	•••		•••	•••	742,887	11.33	123,340	135	149	389
1977	•••		•••	•••	711,037	10-75	111,925	135	112	418
1876		•••		•••	561,580	8.49	No data.	75	91	500
Moan of	he deca	de 18	76-85	•••	812,031	12:27	188,104	91	125	445

Province during the year under review in contrast with those of the preceding decade are presented in the marginal table. They indicate that the mortality was higher than during any year of the period with which comparison is instituted; but that the extreme virulence of the disease itself was confined within narrower limits than during any year of the same period except 1885. Nevertheless, I believe, and am supported in my belief by local testimony in not a

few instances, that the numerical increase in the fever casualties is, to no small extent, due to improving registration.

69. To the total mortality of the year from fever the urban circles contributed 29,615 deaths, or in the proportion per

Comparative mortality from Fever in the Urban and Rural Circles.

tributed 29,615 deaths, or in the proportion per mille of their population of 12.29, and the rural 1,027,681 deaths, or at 16.11 per 1,000. The

figures of the preceding decade are—for the urban circles, deaths 36,586, ratio of deaths 15·18, and for the rural circles 775,445 and 12·16 respectively. These data indicate that while during the decade the urban population suffered on the whole considerably more than the rural, this year the contrary was the case.

70. This subject will be better understood if the figures appertaining to each division of the Province are separately considered, for the seasonal incidence of fever in Bengal and Orissa differs from that obtaining in Behar and

Chota Nagpore. This will be done hereinafter when dealing with the fever

Rain-fall Deaths Rain-fall in 1886. in 1886. in 1886. in 1886. 89,884 67,406 16.39 July January ·09 2·24 83,144 89,832 15·28 14·87 68,988 August February September October 74,204 77,069 March -95 4.76 April May 71,491 65,208 November 132,654 December 133,199 6.75 .81 10.74 .17 June

statistics of each division; but I may here, however, present marginally the figures of the entire Province for 1886. They will be found to maintain, on the whole, the law of former years, which,

briefly stated, is that with increasing temperature and rain-fall up to July, monthly mortality is low, but from August onwards it increases rapidly, the last quarter always showing a preponderating death-rate.

71. Pre-eminent suffering from fever was experienced in the districts

Districts in which Fever prevailed most severely.

		Ratio per mille.				Ratio per mille.
Jalpaiguri	•••	31.01	Dinajpur		•••	23.92
Shahabad	•••	29.20	Bogra		•••	22.21
Pubra		27.68	Nuddes			21.26
Rungpur		27.12	Bhagulpore		•••	21.08
Rujshanye	***	24.86	Gya			19.07
Monghyr	•••	24.07	•	•		

named in the margin. It is gratifying to find that Nuddea has, from occupying the first position in this list in preceding years, descended very low in it, indicating very considerable improvement in its health status, so far as fever is concerned.

72. A brief review of the incidence of fever in the four great Divisions of the Province and in DisGeneral history of Fever in the Divisions of the Province and in tricts, and a resumé of interesting or instructive local

outbreaks of the disease are subjoined.

BENGAL.

Of the population amounting to 35,073,770, of Bengal Proper, 601,718 73. died from Fever in 83,376 villages, or in the Mortality from, and seasonal inci-dence of Ferer in the Bengal Proper dence of Fever in the Bengal Proper proportion of 17.15 per 1,000. 1885 showed 588,986 deaths, or 16.79 per 1,000 in 82,326 villages, and the lustrum 1881-85, 582,688 deaths, or at 16.61 per 1,000. These statistics indicate that a somewhat larger area of Bengal was pervaded by the disease in 1886, and that the mortality was higher than during both the periods with which comparison is instituted, as an additional 1,050 villages were attacked and the death-rate was higher by '36 per 1,000 of population as compared with 1885, and '54 per 1,000 as contrasted with the proportion of the lustrum. It, is also found that this division of the Province

• •	Numb desth	H 113 BOB		Mean deaths luring decade 1876-85.	Average rain-fall of pre- ceding years.	malady.	the most The	margi	nal
January February Murch April May June July August September October November December	57,6 43,7 47,6 47,0 43,3 35,6 36,2	551 77 60 86 81 13 13 166 139 139 198	·15 ·07 2·93 1·53 9·02 2·84 7·46 7·13 5·24 8·48 ·18	46,894 86,500 87,034 86,688 82,526 28,143 80,026 84,081 87,979 47,233 62,613 66,203	-42 1.06 1.62 2.86 7.14 14.90 14.92 14.70 11.15 4.81 -49 -30	sonal inc year unduring the They ind to Aug mortality greatest	illustrate idence de nder rev ne decade licate that cust or s y is least, in the las ne first fo	uring to the second sec	lay ber is ter,

occupy an intermediate position. In this there is a correspondence with rain-fall and its results. As long as the country is saturated or covered by repeated falls, fever mortality is low, but rises rapidly with the cessation of rain and

tne advent of cold. 74. BURDWAN DIVISION .- Of the population in this Division estimated at 7,393,954, 102,188, or 13.82 per 1,000 Incidence of Fever in the Burdwan were carried off by fever in 22,318 villages. Compared with the preceding year, there was an increase in the number of villages

affected of 817, but a decline in mortality of .97 per 1,000 of population, and in contrast with the lustrum 1881-85 there was a sensibly greater diminution of the casualty rate, viz., of 3.58 Ratio per

mille.

Burdwan Birbhum Midnapore	 	16:09 Hughli ar 14:63 Bankura 14:55 Howrah		13·88 12·63 8·96	to the oby its sin the
	Difference in morta- lity.	Difference in percent- age of villa- gos attacked.	Difference in morta- lity.	Difference in percent- age of villa- ges attacked.	of seve of preva of the with its
Burdwan Hughli Birbhum Howrah	2·69 <i>D</i> 1·86 <i>D</i> 1·62 <i>D</i> 1·05 <i>D</i>		kura •28 <i>I</i> napore •02 <i>I</i>	4·12 <i>I</i> 1·63 <i>D</i>	the prediction in the distance of the distance

Ratio per

per 1,000. The contributions divisional mortality ix districts are given margin in the order The extent ority. alence and fatality disease compared s incidence during eccding year varied. lifferences are also shown in the margin. The

fever histories of these districts for the year under review are subjoined.

Burdwan.-If the marginal figures, comparing the mortality of the year under review with that of the lustrum 1881-85, Ratio per mille. can be relied upon, it must be said that the unenviable notoriety for fever attaching to this dis-15.09 1: 1886 The records of the Dispensatrict has vanished. 17.78 18.81 1885 ... ries, however, show that the progressive decline in ,, 1884 ••• ... 28.85 ,, 1883 ••• ••• attendance at them for treatment for fever since 1882 28.86 1882 ceased in 1886 with a slight increase. The only re-23.65

ported noticeable outbreaks of the disease in this district are those which occurred in the town of Kalna and in thanas Purbasthali and Kalna during October to The severity of the disease was very great in these localities, the December. death-rates amounting to 17.98, 18.42, and 17.50 per 1,000 of population respec-With regard to the town, the Sub divisional Officer reports that it is the most unhealthy spot in the whole sub-division, and that its sanitary condition is very bad. In Bankura the incidence of the disease was identical in feature to

that in Burdwan, except that there occurred only 288 more deaths as compared with the preceding year,—vide figures in the margin. This increase was contributed to by thanas Simlapal, Scopur, Raipur, Gungajulghatti and Bankura to the extent of 4.47, 4.24, 1.76, .86 and .64 per 1,000 of population respectively, and yet Simlapal and Scopur, which are also among the areas in the district which furnished the highest

mortality, and Raipur, are said to escape malarious influence considerably owing to their elevated positions. Of the areas which returned the highest death-rates, Kotalpur and Bishenpur, which bore the greatest burden thereof, viz. 15.87 and 14.34 per 1,000, and Indas, which furnished a death-rate of 12.71 per 1,000, are believed, owing to their bordering on the Burdwan district without any river or any other line of demarcation between them, to be subject to the same fever which prevailed in Burdwan. They are, moreover, low-lying, swampy, have imperfect drainage, and abound in low dense jungle. Gungajulghatti and Sonamukhi, where also the suffering was great (death-rates per mille, 13.62 and 11.23), have more or less obstructed drainage from various causes too long to enumerate here. With regard to the town of Bankura, where the death-rate amounted to only 9.86 per 1,000, the Assistant Surgeon reports that malarious fever is seldom seen in it, while malarial cachexia is unknown, and that the recorded deaths from fever are generally contributed by the outlying villages and small hamlets which form a part of the Municipality. With regard to the Bishenpore town where also the fever mortality was low, viz., 9.63 per mille of population, the Sub-divisional Officer notes that, during his experience of this town for the last 12 years, he does not recollect to have witnessed such a healthy year as the present, and he ascribes this "sudden and conspicuous change" more to "divine elemency than to any human efforts." Birbhum.— This is another district which has to be congratulated for the steady decline of fever mortality in it from 25.31 per 1,000 of population in 1881 to 14.63 per 1,000 during the year under review. All the circles in this district, excepting Sacoolipore, took a share in this improvement; but Sacoolipore has always returned a high mortality. It is a low-lying alluvial tract with many undrained bhils, and its water-supply is bad. The Soori town enjoyed exceptional immunity from the disease, as the death-rate fell by so much as 5.86 per 1,000 of population in contrast with the rate of the preceding year. This incidence and the general improvement of its health status elicited the observation "that medical men had little to occupy them" in this town. It was noticed that the heavy rains of September and October was followed by much increase of mortality so as to render the fourth quarter of the year the most unhealthy. Fever prevailed in the **Midnapore** district with much the same severity as in the preceding year, but with abated virulence as compared with the four years preceding 1885. It appears therefore that the district is improving, on the whole, in health as regards this disease. It was observed that in the eastern, central and southern parts of the district the influence of the disease is on the ascendant; while in the other portions, particularly the laterite tract and along the sea-belt, it is abating. The observations of Dr. Gupta, Deputy Sunitary Commissioner, Metropoliton Circles, in village Kristonuggur, in thana Nundigram, induce him to believe that there is no malaria in this part of the country, and that this is owing to its soil containing salt, which is "germicide and kills bacillus malariæ if such exists." Hughli.—There was less fever in this district than during the past five years; but its Seram-pore division did not experience the same immunity. In the towns in this Sub-division, in addition to the intermittent fever of malarious origin, "remittent fever was also unusually severe at the end of the monsoon, particularly in October and November, when many cases of a low adynamic type, accompanied with diarrhoa, extending over three weeks, were met with, some scarcely distinguishable from enteric fever." A similar fact was noted by Dr. Joubert during his tour in Hughli. Cases of very fatal cerebro-spinal fever were also met with. In the Bansberiah Municipality fever of a malarious character prevailed with much severity. It is said that when it first broke out in 1861 in a "deadly" form, it reduced the people by nearly one-half, and now many

a homestead is to be found covered with "luxuriant jungle." The Chairman of this Municipality reports that the town is literally covered with mango-topes, and abounds in rank vegetation, and that the Suressutti khal, the water of which is used by a portion of the people, is obstructed by dams. Orders have been passed to remove the dams, but the Chairman suggests that the water of the Damuda, coming through Selimabad, should be made to flow into the khal. It would appear that there was more fever in the **Howrah** district than during the past lustrum, but it is evident from the returns that both the present and past fever statistics of this district are altogether unreliable.

76. PRESIDENCY DIVISION.—In this Division fever visited 17,036
Incidence of Fever in the Presi. villages, and carried off 135,800 of the population,
dency Division. numbering 7,771,693, or at the rate of 17.47 per
1,000. In 1885, 16,601 villages were attacked and 20.11 per 1,000 of the
people died, and during the lustrum 1881-85 the death-rate stood at 21.61 per
1,000. This comparison indicates that with an increase of area pervaded by the
disease was associated a considerable reduction of mortality. The five districts

Ratio per mille.

Nuddea ... 21-26
Murshidabad ... 18-33
Jessore ... 18-08

Ratio per mille.

Ratio per mille.

Ratio per mille.

Ratio per mille.

Ratio per mille.

Ratio per mille.

17-56
casualty rates marginally exhibited in order of severity. In comparison with the outcome of the preceding year, the disease was present in all these districts

excepting 24-Pergunnahs, in a larger number of villages, conspicuously so in Murshidabad, where the percentage of villages attacked was 87:80 against 76:87 in 1885; but the mortality was lower in all the districts without exception, pre-eminently in Nuddea and next in Jessore, where the decline in mortality is represented by 5:59 and 3:41 per 1,000 of population respectively. The main facts connected with the incidence of the disease in these districts are subjoined.

77. 24-Pergunnahs.—The mortality from fever in this district was low,

lower than during the past decade—vide marginal figures; but I believe that these Ratio per mille. Ratio per mille. 16.60 figures are very defective, for the grave In 1881 In 1886 12.91 ,, 1880 14.09 causes of the disease, the most prominent " 1879 " 1878 " 1877 In 1885 14.25 18.60 ••• of which are referred to hereinafter, 14·16 14·70 15·63 17·40 15·79 ,, 1884 1883 " 1877 " 1876 must produce a higher mortality. ,, 1882 14.89 reports show that the drainage of the

Baraset, Bussirhat and Dum-Dum sub-divisions is defective throughout. Chairman of the Naihatti Municipality, however, is of opinion that the new Hughli bridge has assisted in improving the water outlets of a part of his town. In the Baraset sub-division, the conservancy arrangements and water-supply are also exceedingly and. In the Bussirhat sub-division the old bhils and tanks have gradually silted up, and rain water has no discharge outlet; the river water becomes brackish during the hot weather; and The serious effects on health the dead are buried within house premises. caused by the silting up of the Nowayee and Soontee nuddies have been fully described in my Annual Report for 1884, page 63, and in my special reports on the subject to Government. The local reports again mention this as well as the silting of the Nawal and Lazooee nuddies as responsible for a great portion of the fever in this district. The Sub-divisional Officer of Dum-Dum states that the Nawal nuddi, formerly an open channel from the Hughli at Ichapore to the Biddyadhuri river, has disappeared, and that this has had a bad effect on the health of the people. The Cantonment Magistrate of Dum-Dum also speaks of the silting up of this nuddi as affecting largely the health, comfort and well-being of the people. The nuddi is now "a long depression of bunded tanks, reaches of still water, and swamps covered with alternately growing and decaying vegetation, creating a malarious condition of the atmosphere which has a most deleterious effect on the health of the people." villages in the Baraset sub-division fever was found by the Deputy Sanitary Commissioner, Metropolitan Circles, to be very badly prevalent. Both-adults and children presented tumid abdomen with enlarged spleen and liver, and were weakly and anæmic. Dr. Gupta characterizes the fever as of the worst type he had seen for a long time. It appears that the great scourge of the Baraset Municipality is the fever which has been prevailing in

it since 1861. The Chairman states that it is epidemic in character; that no constitution is proof against its attack; that it is of a "terrible" type hard to bear; that it comes on when the moon is full and when it is totally "dark;" that general prostration and loss of appetite for days together are the results when it has left a person; and that when enlargement of the spleen and liver affections supervene, the chances are that death ensues. He is of opinion that "the only way to drive out this scourge is the re-excavation of the Lazooee and Scontee rivers"; but he regrets that the reiteration of this suggestion for the last 20 years has not resulted in its having been acted upon; and he urges that it should be no longer neglected owing to financial considerations, as the population of the locality is steadily decreasing. When on tour in this district Dr. Gupta found the stench from the canals in Baliaghatta and from the Salt-water Lakes to be most overpowering. The places referred to all lie to the north and east of Calcutta. In short, the greater part of the 24-Pergunnahs district is water-logged, and the excessive dampness of the soil resulting from this gives rise to considerable sickness in the form of malarial fever and bowel-complaints. Nuddea.—I am glad to record that,

			_
	0	ercentage f villages ttacked.	Ratio of deaths per <i>mille</i> .
In 1886	•••	94.	21.26
,, 1885	••	89.	26 · 85
,, 1884 ·	•••	86·	29·22
,, 1883		86	27.60
,, 1882	•••	92.	30.50
,, 1881	•••	94.	35.54
1880		96.	29.98

although fever was somewhat more widespread this year, it was very considerably less fatal than in any of the past six years during which it prevailed in epidemic form in this district—vide marginal figures. The returns show that every circle in the district, 31 in number, shared in this immunity, excepting Jaguli,

as compared with 1885 and 1881, Chagdah with 1881, Nowpara, Kumarkhalli, Baluka and Bhadulia with 1882, Dowlatpore with 1881 and 1882, Kalupol with 1883, and the Meherpore town with 1885. The Kushtea town appears to have suffered more severely this year than during all the past years under notice. It is reported that the fever mortality includes many cases in which the disease has become chronic and complicated with anemia, dropsy and enlarged spleen, and which, on the advent of the cold weather, were attacked with severe dysentery and acute pulmonary affections and succumbed to them, being unable to resist the vicissitudes of temperature, owing to insufficient clothing, poor food, and lowered vital stamina. In seasonal incidence the disease while exhibiting much severity before the rains had set in, became virulent and highly fatal after their cessation in October, so as to render the fourth quarter of the year the most unhealthy, maximum mortality occurring in November. Although the care which has hitherto been bestowed in registration has, it appears, been somewhat relaxed, particularly in the towns, I agree with the local authorities that the district has, to a great extent, recovered its normal standard of health so far as fever is concerned. Jessore.— This is another district in which the disease prevailed with considerable lower severity than since 1880; but a large number of villages in the Sudder, Narail, and Magura sub-divisions and village Kotechandpur in the Jhenidah subdivision, are said to have suffered very much, the prevalence of the disease in them being referred to bad drinking water, obstruction of drainage, general There was, on the whole, less fever in Murshidabad uncleanliness, &c. than during the preceding quinquennium; but the Assanpur and Gorabazar thanas and city Murshidabad suffered markedly, returning the death-rates of 36.77, 29.20 and 33.13 per 1,000 of population respectively, and a very severe local outbreak occurred in certain villages in thana Gowas, which was attributed to the dense jungle which abounds near them, but it readily yielded to treatment with the cinchona febrifuge which was sent by the Civil Surgeon, and which was much appreciated by the people. The Khulna district experienced less suffering from fever this year than since its creation in 1882; but while prevailing with normal severity, it suddenly assumed a very virulent type in November, and was unprecedentedly fatal in December, particularly in thanas Dumuria, Bagirhat, Magura, Katuria and Rampal. Assistant Surgeon Umesh Chunder Ghose, Deputy Superintendent of Vaccination, Metropolitan Circles, notes that in the Satkhira thana 79 per cent. of the children examined by him were found to have enlargement of the spleen; that in several villages in thana Magura the disease was present in every house; and that in some villages in thana

Kalarooa, which suffered much from fever, the river Betna, which runs by them, has silted up, and from various causes its water becomes so bad as even to kill the fish. It was noted by the Civil Surgeon that the good effects of even partial drainage were most striking during the prevalence of the fever in November and December; for the town of Khulna, which is partially drained, suffered in a minor degree, while the villages on the opposite side of the river, which have no drainage, suffered to an alarming extent. The causes which were in force in the Backergunge district (vide paragraph 81 of this Report) appear to have been in operation in Khulna. RAJSIIAHYE DIVISION.—In this Division the casualties from fever

Incidence of Fever in the Rajshahye

numbered 199,649, or at 25.81 per 1,000 of its popula-Division. tion estimated at 7,734,733 against 171,664 deaths, or at 22·19 per 1,000 in 1885 and 148,997 deaths, or in the proportion of 19·26 per 1,000, during the lustrum 1881-85; and the number of villages which were affected was 21,373 against 21,746 in the preceding year. These figures show that a somewhat smaller area was affected, and that the mortality was considerably higher, particularly in comparison with the lustrum above mentioned. This division of Bengal suffered the most. The

Ratio per Difference in mortality as compared with 1885. 7·80 I ... 31.01 Jalpaiguri 27·68 27·12 2·05 I 4·40 I ·83 I Rungpur 24.86 Rajeĥaliye Dinejpur 6.04 I 1.00 I 23.92 ••• Bogra Darjiling 22.21 5.21 I 16.35

mortuary statistics of the seven districts in it are given in the margin in the order of the severity of the casualties, and they indicate that the fatal results were greater than during the preceding year in all the districts, prominently so in Jalpaiguri, Dinajpur, Darjiling and Rungpur. The history of fever in these districts is given below-

Dinajpur.—This district experienced a severer fever year than any since 1876, excepting 1877. All the circles in the district contributed, to a more or less extent, to the increment in the death-rate as compared with 1885. excepting Parbutipur, where the mortality was the same-22 per 1,000; but inordinate suffering occurred in Pirganj (death-rate 31.62), Thakurgaon (28.13), Chintamon (27.79), and Birganj (27.34). Fever begins to prevail in this district during the rains and continues to progress with severity to the end of the cold During the cold weather those whose constitutions have been shattered and debilitated by previous attacks of the disease mostly succumb to it. year the rain-fall amounted to 74.52 inches against the normal average of 58.44 inches. In the Rajshahye district fever provailed to a somewhat greater extent than during the preceding decade, excepting in 1881, 1883 and 1884. Its incidence was greater during the last quarter of the year, and pre-eminent mortality occurred in the Ben. 38th. Nattore and Puteah thanas, where the death-rates stood at 38.48, 28.98, and 27.42 per 1,000 of population. Generally it was noticed that the northern portion of the district suffered less than the southern. The District Engineer, who visited the Hoja nudai during the year, says that it is much obstructed by fishing weirs, and that many burials take place along its banks; and that although during the last two years the water has been of better quality in consequence of inundations, things will never be on a proper footing in the part of the country which the Hoja drains, till it is well opened out to allow the water to flow freely. Fever prevailed more

	Ratio per mille.		Ratio per <i>mille</i> .
In 1886	27·12	In 1881	14-60
		,, 1880	9.92
1885	22.72	,, 1879	9.62
1684	17.09	,, 1878	11.28
. 1853	15.68	,, 1877	11.96
., 1882	11.49	,, 1876	5.86

extensively and fatally in Rungpur than in any year for which records are available. A comparison with the returns of the past decade (given in the margin), which are more reliable than those of anterior periods, shows that the increase of mortality in 1886 was very great. In fact,

this district stands fourth on the list of the most severely fever-stricken districts in the Province. Dr. Dutt, the Civil Surgeon, is of opinion that the extraordinary rise in the death-rate of the district cannot be due entirely to improved registration, but also to the greater prevalence of sickness. All the circles in the district returned considerably enhanced death-rates over 1885, excepting the Rungpur town and the Kaliganj thans. The circles in which the greatest suffering was experienced were Mahigunge 42.33 per 1,000), Kumargunge (34.37), Pirganj (30.46), Sundergunge (29.46), and Sadullapur (28.05). The reduced

prevalence of fever in the Rungpur town (where, however, the casualty-rate was not low-27.92 against 31.08) during this year of extensive fever prevalence is attributed to greater attention having been paid to its sanitary arrangements. The main features which distinguish most of the severely fever-stricken areas have been recorded in former reports. Briefly stated, "they represent depressed basins between the rivers with an intermediate system of tributaries more or less choked, silted and communicating with a number of bhils which they insufficiently drain." It is observed in Rungpur that the quantity and distribution of rainfall mainly influence the fever prevalence. The mortuary returns go to show that October, November and December were the most unhealthy months, when most of the fever-stricken people died of the sequalæ of the disease, aggravated by the sudden advent of the cold weather acting on debilitated constitutions. Fresh attacks of fever were few, but pulmonary and enteric complications were the chief causes of death in patients having enlarged spleen and liver." Bogra.—In this district also the prevalence of fever was greater than during the preceding decade, and all its circles, excepting Panchbibi, returned higher death-rates. The disease was observed to prevail most in the Sherepur and Nawabgunge thanas, and here the mortality stood at 29.79 and 27.55 per 1,000 of population. This great suffering is referred to these thanas being very damp and full of dense jungle. Pubna also experienced a very bad fever year, and returned a mortality in excess of that of any year of the decade 1876-85. It stands third on the list of the most severely fever-stricken districts in the Province. The circles of

greatest suffering were those Ratio per mille. Ratio per mille. named in the margin, and they, Serajganj town Chatmohur thana ... 37.93 Raiganj thana Dulai excluding Dulai and including 29.26 33.15 28.98 Ullapur, shared among them-Serajganj 80.78 Pubna ... 27.84 selves the excess mortality of

the year. The Serajganj town is in an extremely unhealthy condition. I enquired into the cause of the fever in this town when inspecting it, and found that in the open, unshaded coolie lines with good pucca wells, the health of the operatives was good, but that those who came from Bengali villages, overgrown with jungle, riddled with pits and excavations, and badly drained, who use kutcha wells and bury their dead in their homesteads, were very unhealthy. Places at a short distance apart from each other exhibited marked difference The pits above referred to are a mile in length in the centre of as to health. the ganj, and the local opinion is that, unless they are filled up and converted into a large tank and a garden, the people will always suffer from fever. The unhealthiness of Dulai is attributed to its scanty water-supply, and that of the district generally to the insanitary conditions which obtain in it, and, in addition, to the houses being damp and improperly constructed. The history of the Jail shows that many of the admissions into it during the year were suffering from malarious poisoning, those received from the Serajgunge sub-division being the worst. Dr. Owen, the Civil Surgeon, is of opinion that the lives of several of these men were saved by admission into jail. In Darjiling the mortality from fever was unprecedented, every circle contributing to the excess, and Kurseong and Phansedewa returning the bulk of it, viz., 21.64 and 19.68 per 1,000 of population respectively. As usual the disease prevailed noticeably in the Teesta and Rungeet Valley in the Sudder station of Darjiling, in certain villages in the Terai, and in the Nijkaman Tea Estate. Four cases of typhoid fever appeared in the Darjiling town, of which three were clearly traced to importation, and one was of local origin having occurred in the Convent School, the sanitary condition of which was unobjectionable. In the Kurseong town, remittent fever complicated with pneumonia was fatally prevalent during the spring months, to which some Europeans succumbed. Of all the districts in the Province, Jalpaiguri was the most severely afflicted with fever. It returned

Ratio per mille. 31 01 Ratio per mills. 19:82 In 1881 ,, 1880 In 1886 • ... 16.00 *** 1885 23·71 18·25 1879 1878 ••• 10.87 " ... 16.87 1884 ... ,, 1883 18.40 13.99 ,, 1876

a mortality considerably in excess of that of any year of the preceding decade (vide marginal figures), and this exacerbation occurred in every circle excepting the Jalpaiguri town, where the death-rate fell from 14.47

in 1885 to 10.19 per 1,000 of population. The suffering was great in all the

circles, Boda, Salbari, Mynaguri, and Jalpaiguri bearing the greatest burden of it with casualty rates amounting to 34·14, 33·91, 33·15, and 32·14 per 1,000 respectively. It is much to be regretted that this great rise in the prevalence of the disease has not been satisfactorily explained by the Civil Medical Officer of the district.

80. DACCA DIVISION.—The returns of this Division show that 15,513

Incidence of Fever in the Dacca of its villages were invaded by fever, against 14,861

Lin 1885 and that 119,170 succumbed to it out of a population of 8,700,939, or at the rate of 13 69 per 1,000, in opposition to 104,335 deaths, or at 11.99 per 1,000 in 1885 and 95,698, or at 10.99 during the lustrum 1881-85. It thus appears that the disease extended to much wider limits

Backergunge 16-79 ... 14-24 shown in the margin. Compared with the outcome shown in the preceding year, it appears that, excepting Mymensing, larger areas were overrun by the disease

in all the other districts, the excess percentages of villages pervaded in Dacca and Faridpur being very considerably greater, viz., 24.45 and 17.52 respectively; and that the mortality was higher in all of them, the increment in Backergunge and Mymensing being noticeably large, viz. 2.42 and 2.37 per 1,000 of population respectively. A review of the distinguishing features connected with the

provalence of fever in these districts is subjoined.

The returns show that there was more fever in the Dacca district in 1886 than during any year of the preceding decade excepting 1881; but the Civil Surgeon ascribes the numerical increase in the deaths recorded to erroneous diagnosis of the disease, as deaths from ailments presenting febrile symptoms were, to his knowledge, in many instances reported as having occurred from fever, and to better registration, inasmuch as the Jail and Dispensary records and public opinion go to show no enhancement of fever prevalence beyond the normal. The registration may have improved, but it appears to me that in the majority of the circles little or no attention is yet paid to the subject. Hurrirampur, Jaffergunge and Manickgunge again, as in years past, presented the highest death-rates, viz. 22.31, 21.66 and 18.76 per 1,000 of population respectively, from causes which have often been furnished in the reports of previous years, and which, briefly stated, amounts to defective drainage. On the subject of inundations affecting health, the Civil Surgeon pointedly observes that, "the inundation which is of annual recurrence is perhaps the saviour of the town and district, washing out and cleaning all the accumulated filth and stagnant collections of water of the preceding year; and, although the legious, cholera, &c., yet without the inundation it is more than probable that there would be no healthy season at all, and certainly many more of the present filth diseases." Although Faridpur experienced a severer fever year than the past, yet the disease was not highly fatal on the whole, or in any particular circle excepting in Belakandi, which returned a death-rate of 22 per 1,000 of population. As usual, the fourth quarter of the year was the most unlealthy; but this year the first quarter also presented nearly the same feature. The steeping of jute, which is extensively carried on in the Kumar and other rivers in this district, is reported to have had some share in promoting unhealthiness by impregnating their water with organic matter. Backergunge is another district in which the severity of the disease was greater than during any year of the preceding decade, excepting 1882, when the mortality was only slightly in excess. While prevailing with mildness generally, it was pre eminently fatal in the Barisal, Nalchitti, and Mendigunge thanas, where the death-rates amounted to 31.35, 27.67, and 25.67 per 1,000 of population. The Deputy Sanitary Commissioner, Eastern Bengal Circle, found, during his tour in December, fever intensely prevalent in many villages, not only in the above named thanas, but also in thanas Gournaddi, Surupkati, Jhalokati, and Backergunge. In the villages of Banpur and Backergunge, in the last-named thana fever prevailed with great severity among the Christians; but all the persuasions of Mr. Fasson, the Magistrate, to clear their homesteads of stagnant water and decaying jungle, proved abortive, although priestly authority and police influence were brought to bear on them. In than Sarupkati, and in fact in the whole of the Perozepur sub-division in which this thana is situated, the water-supply is very bad, but the endeavour of the Magistrate to improve it, elicited the reply that, "the universal saturation of the soil by strongly saline water percolating inward from the sea and great tidal rivers was an insuperable obstacle to the obtaining of really drinkable water over a great part of the sub-division." In Nalchitti.the town suffered the most, but here the habits of the people are very filthy, the drainage is bad, and it is closely surrounded by a mass of jungly homesteads. The Assistant Surgeon says that the fever of the district, which is of a malarious type, is not of itself of a fatal nature, but that death results from the serious complications of lung and brain (not of spleen, the enlargement of which is not common, in fact scarcely met with) which supervene, owing to neglect of treatment on the part of the sufferers; and that the peculiar local conditions of the district, such as damp climate, heavy rain-fall, flooding of the country which remains submerged for three or four The fever of this year was of unusual severity, months, cause the disease. and partook the character of a local outbreak confined to the districts of Backergunge and Khulna, the former not suffering, as a rule, much from malaria. The great severity—greater than in any year of the past decade—of fever in the Mymensing district is accounted for as follows by the Civil Surgeon:-" Malaria is rife in this district; the country is damp; the variations of temperature are great; the cold is rather raw than bracing; the whole district is more or less intersected with water-channels. There are also in the district two specially unhealthy tracts, viz., the Terai land along the foot of the Garo Hills, which run along the whole northern boundary of the district and the Madhuban forest in the centre of the south of the district." But Dr. Crawford also associates the enhancement to improving registration and to deaths from doubtful causes or from some acute diseases attended with fever being put down to fever.

82. CHITTAGONG DIVISION.—In this Division the casualties from fever amounted to 44,911, or in the proportion of 12.93 per 1,000 of its population, estimated at 3,472,451, against 47,231 deaths, or at 13.60 per 1,000 in the preceding year, and 41,311 deaths, or at 11.89 per 1,000 in the preceding lustrum; and the number of villages which were affected amounted to 7,136, against 6,935 in 1885. These figures indicate an increase in the extension of the disease and a fall in the death-rate as compared with 1885, but an enhancement of mortality as compared with the lustrum. Of this division the Noakhalli portion exhibited a death-rate of 16.79 per 1,000, the Tipperah portion 12.15 per 1,000, and the Chittagong portion 11.18. Compared with the outcome of the preceding year, larger areas were invaded by the disease and higher mortality occurred in Noakhalli; extension of

 the disease associated with a decline Difference Ratio of in mortality took place in Tipperah; in percentage of villages deaths per and a decline both in prevalence and mille. attacked. fatality is observable in Chittagong. 2·99 I 2·67 I ·87 I Noakhalli ·08 D The marginal figures show the extent of the differences. Such facts con-

nected with the fever history of these districts as have been furnished are

subjoined.

83. The ordinary fever of **Chittagong** was no where epidemic, and presented a lower death-rate than during several years of the past decade; but dengue is reported to have prevailed very extensively in the autumn among the shipping in the Port. It was first seen in a ship which arrived with sand ballast from Colombo. It then spread to several other vessels. In the town only the Civil Surgeon and two other Europeans who had contact with the shipping were attacked; and in no case did the disease prove fatal. A full account of this malady will be found in Section X of this Report under the head of "Researches relating to special diseases." There was more fever in **Noakhalli** than in any year of the preceding decade during which the casualty. rates ranged from 7.46 per 1,000 of population (the lowest) in 1876, to 16.42 per 1,000 (the highest) in 1885. The disease appears to have prevailed most in the Chagulnia, Bamni and Hattia thanas, where the mortality stood at 20.42, 20.20, and 19.58 per 1,000 of population respectively. **Tipperah**.—This district also returned a higher death-rate in 1886 than during any year of the preceding decade, during which the mortality ranged between 5.31 per 1,000 of population in 1876 and 12.23 per 1,000 in 1885.

BEHAR.

84. In Behar fever caused the death of 370,740 persons out of a population Mortality from, and seasonal incidence of fever in the Behar Division of he Province.

84. In Behar fever caused the death of 370,740 persons out of a population numbering 23,127,104, or in the proportion of 16.03 per 1,000, and the disease was distributed in 42,652 of the villages. In 1885 the area attacked

was represented by 43,586 villages, and the casualties amounted to 377,718, or at 16.33 per 1,000 of population; and during the lustrum 1881-85, 297,165 persons died, or in the proportion of 12.84 per 1,000. This comparison indicates that the disease was confined within somewhat narrower limits than in 1885; and that while the mortality was a little lower than in that year, it was considerably higher than during the preceding lustrum. In seasonal severity the disease differs somewhat from that of Lower Bengal. In both the time of greatest mortality is the

					0	fourth quarter of the year; but in Behar
		Deaths in	Rain-fall in 1886.	Average deaths dur- ing decade	Normal rain-fall of several	mortality is greater during the rains and
				1876-85.	years.	less in the hot dry months, while in Bengal
January		24,673	.15	16,799	·53	the rainy season is the one of smallest
February	•••	19,177	·18	14,620	•55	mortality. The marginal figures, extend-
March		20,372	⋅62 ●		.89	
A pril	•••	23,189	.16	18,592	·61	ing over a period of 11 years, illustrate
Muy		21,851	3.20	18,183	2.47	these observations. In Behar generally
June	•••	24,184	7:26	18,240	7.84	
July	•••	25,857	17:06	19,201	12.09	the rain-fall is not so great as in Bengal;
August	•••	84,958	14.72	22,705	11.33	the temperature is higher; the natural
September		38,53 9	15.34	22,843	8.58	
October	•••	44,110	6.01	25,821		drainage is better; the soil less tenacious
November		52,370	.15	27,803	.12	of moisture; and the cold weather sets in
December	•••	41,936	-23	24,177	•16	earlier and is associated with a drier
_				7		• • • • • • • • • • • • • • • • • • • •

atmosphere. These conditions may have some influence in creating the differences.

85. BHAGULPORE DIVISION.—In the Bhagulpore, or eastern Incidence of Fever in the Bhagulpur division of Behar, there occurred from fever (East Behar) Division.

151,321 deaths in 17,237 villages among its population estimated at 8,063,160, or in the proportion 18.76 per 1,000. The figures of the anterior periods were—in 1885, number of villages attacked 19,747; deaths 165,039; death-rate 20.46 per 1,000 of population—and in lustrum 1881-85, deaths 120,086; death-rate 14.89 per 1,000. It appears, therefore, that while in comparison with 1885 the disease was confined within narrower limits to the extent of 2,510 villages, accompanied by a reduction of mortality represented by 1.70 per 1,000 of population, it was in contrast with the lustrum 1881-85 considerably more fatal, the excess mortality being

	Ratio per mille.	3.87 per 1,000. Individually considered, the five districts composing this division furnished the death-
Monghyr	24:07	rates exhibited in the margin in the order of seve-
Bhagulpore	21.08	
		rity. Compared with the preceding year, the returns
Purneah	18.61	
Maldah	14:36	show that the disease was more widespread in
Southal Pergunnahs	11.37	
Souther I ergumans	11 01	Bhagulpore and Monghyr, and less so in Sonthal

Pergunnahs, Maldah and Purneah, but that the mortality was lower in all, prominently in Maldah, where it was less by 3.59 per 1,000 of population. The only points claiming attention with regard to fever in these districts are the following.

86. Monghyr and Purneah.—These districts, the first of which returned the highest death-rate compared with the other districts in the division, furnished no particulars with regard to the incidence of the disease in them, but the eturns show that there was more fever in them in 1886 than during any year of the preceding decade, 1885 excepted in Monghyr, and 1878 and 1885 in Purneah, and that inordinate suffering was experienced in thana Tegra and Shaikpura town in Monghyr, where the death-rates amounted to 29.87 and 28.68 per 1,000 of population respectively. In Bhagulpore the prevalence of fever in the tracts bordering on the Kosi river in the Soopol and Mudehpur sub-divisions was, it is reported, caused, as usual, by the inundation which took place in September, thana Kissengunge in the latter sub-division being said to be moreover low and damp, and to remain unhealthy during a great part of the year. In Maldah there was less fever than during any year of the preceding decade, excepting 1879. This reduction is said to be due to the salubrity of the climate throughout the year, and, contrary

to the opinion entertained in Bhagulpore, to the influence of the heavy inundations of September and October over the most part of the district, which washed away the surface impurities. The Magistrate, from his long experience in this and other districts, strongly supports this opinion of the Civil Surgeon. One marked feature of the good done by the inundation was that the Gazol thana and the adjoining Barind, which are notoriously unhealthy on account chiefly of the want of a good water-supply, were this year much freer from fever. It should be observed that in seasonal severity the disease partakes in Maldah more of the characteristics attaching to it in Lower Bengal than in Behar, inasmuch as it exhibits lowest prevalence during the rains, higher severity during the hot weather, and culminating virulence during the cold weather. Sonthal Pergunnahs.—The Civil Surgeon of this district is of opinion that although the fever prevailed with much severity during the rains, and with greater intensity during the cold season, the large rainfall and cooler climate of the year was generally beneficial to health, inasmuch as there was a great reduction in mortality from the disease as compared with the preceding year when the rainfall was less. The statistics, however, of this district are quite unreliable.

87. PATNA DIVISION.—The deaths from fever in this division of Behar Incidence of Fever in the Patns numbered 219,419, and occurred in 25,415 villages, (West Behar) Division. and among a population estimated at 15,063,944, being in the proportion of 14.56 per thousand. In 1885, 23,839 villages

, 6	one pro	Рогогод		were affected, and 212,679 persons, or
	Ratio of deaths per mille in 1886.	Difference in mortality as compared with 1885.	Difference in percentage of villages affected as compared with 1885.	at 14·11 per thousand, died, and the lustrum 1881-85 exhibited a death-rate of 11·75 per thousand. These figures in-
Shahabad Gya Patna Chumparun Durbhauga Mozufferpore Sarun	19·07 15·01 14·93 10·16	9·48 I 1·64 D 1·46 D 2·25 I 2·04 D 1·82 D	·77 D ·82 D 6·98 I 11·40 I ·81 D 9·20 I 7·45 I	dicate much increase both in the extent of prevalence and fatality of the disease. The statistics in the margin show the health status in each of the seven districts
	000	10 1	. 20 2	comprising this division so far as fever is

concerned. They denote chiefly that the mortality was not only markedly great in Shahabad, but was also conspicuously higher than in 1885, and that noticeably larger areas of the country were overrun by the disease in Chumparun, Mozufferpore, Sarun and Patna in the order named. The interesting points connected with the prevalence of the disease in these districts are referred to below.

Patna.—In this district the severity of the disease commenced from August, and the bulk of the mortality occurred in the fourth quarter. ascribed to the rain-fall having been much above the average (60.30 against 42.05 inches), and to its having continued into October, when 6.22 inches fell against 3.11, the normal average; but it is to be observed that the deathrate was larger in two out of the preceding four years, when the rain-fall was much The inundations were unusually heavy and lasted later than usual, and the Sub-divisional Officer of Behar says that fever raged epidemically after falls of rain and after its subsidence "when noxious exhalations arise from the polluted soil and the decomposing filth scattered all around the villages." Gya there was more fever than during all the years of the past decade, excepting 1884 and 1885; but it was noticed that while the mortality was lower than during these two years, the rain-fall was much greater. The Magistrate reports that fever prevailed very severely in the Tikari and Bela villages in Tikari and in the Korathu village in Jehanabad, due, according to him, to the soil of these localities having become damp from having been under water for weeks together owing to heavy rain-fall, and to the drinking water having become polluted by rotting vegetation. It should be mentioned that 90 deaths from fever occurred in the Lodging-houses in this district. Shahabad, -In this dis-

R	Ratio per. <i>mille</i> .			
In 1886*	29.20	In 1881		14·41 6*26
,, 1885	19·72 12·83	" 1879 " 1878	***	12·93 10·87
" 1884 " 1883	12.66	,, 1877	•••	8.48
" 1882 …	12.32	,, 1876	•••	9.99

trict the mortality from fever was very considerably higher than during all the years of the past decade, vide marginal figures. In fact, it was the worst district in the whole Province in this respect. The severity of the disease was pre-eminently great from August to December, during

which 40,010 deaths out of. 57,379, the total casualties of the year, occurred, November alone recording one-fourth, or 10,157 deaths. Every circle in the district returned higher death-rates than in 1885, excepting the town where the recorded death-rate was only 2.64 per 1,000 of population, (the result, evidently, of sadly neglected registration), preponderating mortality being exhibited by the Kharger (42.56 per 1,000), Buxar (40.89), Dumraon (38.73), Mohania (37.56), Dhangain (35.43), Dehri (33.34), and Sasseram (30.39) thanas. Dr. Price, the Civil Surgeon, ascribes the fever to excessive rain-fall (56.11 inches against 40.98, the normal average), and he is also of opinion that the numerous canals throughout the district are to some extent responsible for the much greater prevalence of the disease during recent years in comparison with its incidence in former years. The canals, he says, must necessarily raise the subsoil water-level, and, in a year of unprecedentedly heavy rain-fall, must have brought the water to the surface, this fact being evidenced by the water in the Arrah Jail being only a couple of feet below the ground surface—a state of things unknown before. The observations of Mr. Cameron, the Joint-Magistrate of the Sasseram sub-division, go to show that fever was widely prevalent and virulent in his sub-division, excepting in the Sone Valley up to Akbarpur and beyond, and continued longest in the Dhangaon and Khargar thanas, where irrigation canals and distributaries are most abundant. He joins issue with the Civil Surgeon in attributing this outbreak primarily to excessive rain-fall, and secondarily to the excessive accumulation of water in the low-lying tracts, brought about by the obstruction of drainage caused by the banks of canals and distributaries. He adds that the Abra embankment, constructed by the people themselves for the accumulation of the surface drainage of the country for irrigation purposes, must be largely responsible for the prevalence of fever in their midst. The Magistrate also believes that the same causes operated in rendering the health of the people exceptionally bad, notwithstanding that the food-supply was good. Inundations from the overflow of the Kao and Dargaoty nuddis, covering 160 and 200 square miles, also occurred in October, but the Civil Surgeon is not aware that they affected the health of the people to any extent. The observations of Assistant Surgeon Mathuranath Sen, Deputy Sanitary Commissioner, Behar Circle, during his tour go to show that malarious fever of the intermittent type, with the usual complications and sequelæ, seldom lasting long, but associated with frequent relapses, prevailed throughout the district during the last four months of the year, that it attacked people living both in the elevated and low tracts, hardly any village escaping its visitation; but that the areas which experienced pre-eminent suffering were thanas Dhangain and Kharger, the northern portion of that Suseram, the eastern portion of thana Mohania, the northern portion of thanas Buxar, Dumraon, Belowti and Arrah, and the western portion of thana Beroo. He is of the same opinion as the local officers that the fever was due to heavy rain-fall. The only noticeable fact connected with fever prevalence in Mozufferpore is that an inundation extending over about one-third of the district was not followed by increased unhealthiness; but the registration is so bad that no reliable deductions can be made from the figures. In **Durbhanga** the registration is also evidently defective, and the returns taken in connection with the Civil Surgeon's remark that the deaths reported from fever are probably half deaths from other conditions, plus a febrile condition, are consequently untrustworthy. It appears, however, that the disease prevailed most in the Madhubuni sub-division. This sub-division is, according to the Sub-divisional Officer, in a very insanitary condition. "The people are extremely filthy in their habits; the house refuse and garbage are thrown around the houses; and the water-supply is bad in the extreme, the wells being never looked after and the tanks being simply cesspools." These defects were, however, to some extent remedied. In accounting for the fever which exhibited virulence on the advent of the rains and during the autumnal and winter months, Dr. Gilligan observes that "during the rains the alternating temperature is very trying, and the damp cold from a water-logged soil during the cold weather months is very injurious to weakly, under-clothed and half-fed subjects. Durbhanga is different to the run of Behar districts, inasmuch as we do not enjoy the dry heat and crisp cold, most of them do. The climate

is much more like that of Bengal.' Sarun.—This is another district where the registration is radically bad; but the figures, as they are, showed that the mortality from fever was higher than in 1885, and this is attributed to the rain-fall having been unusually heavy and protracted. There was more fever in the Chumparun district than in any year of the preceding decade, during which the death-rates ranged from 4.28 in 1876 to 12;68 per 1,000 in 1885, the rate of 1886 being 14.93 per 1,000. It is mentioned that the experience of years has shown that fever prevails most in this district during the second half of the year, November being the worst month. According to the Magistrate, the disease prevailed, as usual, with great severity in the notoriously unhealthy Terai tracts in Hurdi thana. He also notes that during the last quarter of the year a virulent and extremely fatal form of the malady was present throughout the Bettiah thana as well as in other parts of the Bettiah su-division, which decimated some of the villages it attacked. The fever of this year is reported to have been on the whole of a very severe and quickly fatal type, death resulting in three or four days. The complaint was general among the people of the Indigo factories in the north and east of the district, so much so that nearly the whole of the employes were struck down by it. The rains commenced earlier and lasted later; there were more rainy days than last year, although the total fall was not greater; the inundations were noticeably higher and much more prolonged than usual; and there was two feet more water in the lakes bhils, and wells at the end of 1886. These circumstances led to the district being unusually damp, and to this dampness the Civil Surgeon ascribes the increase of the fever.

ORISSA.

Mortality from, and seasonal incidence of Fever in the Orissa Division 3,628,832, the events occurring in 9,464 villages. Compared with the outcome of 1885 and of the lustrum 1881-85, an increase is observable in both the extension and fatality of the disease, the former being represented by an excess number of villages invaded of 495, and the latter by an enhancement in the death-rate of 1.30 per 1,000 of population as compared with 1885, and of .92 per 1,000 in contrast with the lustrum above indicated. This division of the Province appears to have suffered the least, but its returns seem to me to be very defective. The three districts composing this division returned the following death-rates:—Balasore 10.78, Cuttack 8.70, and Puri 3.70 per 1,000 of population. Taking this record as it is, there seems to have been an increase of mortality in all the districts as compared with 1885, Balasore showing an excess death-rate of 3.51, Puri of 1.46, and Cuttack of .06 per 1,000. The seasonal severity of the disease is somewhat disturbed or varied in Orissa by the accession of a great number of pilgrims who add largely to the local mortality at certain times; but, on the whole, it corresponded this year with that which obtains in Bengal, showing

	-		٠,					that the rainy season is
		Deaths in 1886.	Rain-fall in 1886.			Deaths in 1886.	Rain-fall in 1896.	the most healthy and the
January	***	8,687	·86 ·05	July	•••	1.531 1.905	11·20 9·36	cold season the reverse
February March	•••	2, 694 2,2 51	8-57	Angust September	•••	1,994	15.24	—vide marginal figures.
April May	•••	1,986 1,665	*06 4·5()	October November	•••	2,384 3,3()9	7·48 1·89	Such particulars regarding
June	•••	1,458	11.76	December		4,267	1.20	the prevalence of fever in the Orissa districts as

have been submitted are subjoined.

ORISSA DISTRICTS.—In Cuttack the disease was most prevalent Incidence of Fever in the district in in the coast tracts where the villages lie near low and marshy land. The Civil Surgeon of Puri notes that during several past years it has been observed that fever assumes a virulent type throughout the district with the advent of the cold weather; and the Magistrate reports that, as usual, the disease prevailed in the localities about the Chilka Lake in thanas Banpur and Puri, and that this year it was of bad type and was present throughout the year; and with reference to this fact he notes that "the Chilka Lake is year by year slowly but surely silting up, and as far as can be seen at present, fever must and will continue to be bred among the

dreary swamps of that region." But Banpur registers very little fever mortality (7.43 per 1,000 of population), and a much greater death-rate from "all other causes" (22.51 per 1,000) than is usual. There is, however, evidently considerable sickness in Banpur, as about 6,000 out-door patients were treated at the local Dispensary. There was considerably more fever in **Balasore** than during any year of the past decade, excepting 1878, the death-rates ranging between 6.01 per 1,000 of population in 1876 and 8.41 per 1,000 in 1885, 1878 showing 11.36 per 1,000 against 10.78 during the year under review:

CHOTA NAGPORE.

91. In this Division Fever carried off 55,712, or at 12.85 per 1,000 of the Mortslity from, and seasonal incidence of Fever in the Chota Nagpore took place in 14,413 of its villages, against 51,044 Division of the Province. deaths, or at 11.77 per 1,000 in 12,794 villages in the preceding year and 52,966 deaths, or at 12.22 per 1,000 during the quinquennium 1881-85. There was therefore some increase in both the prevalence and fatality of the disease as compared with its incidence during the periods

with which comparison is instituted. The four Ratio per districts composing this division are named in the ... 16 35 Hazaribagh margin with the death-rates returned by them in Lohardugga ---••• the order of severity. In all these districts, except-••• ... Singbhum ... 10.25 ing Singbhum, larger areas were invaded by the

disease than in the preceding year, particularly in Lohardugga, where the

Deaths in decade 1876-85. 2,964 Normal Rain-fall in 1886. Deaths in 1886. ram-falt. January February ·51 ·82 3,874 ·19 2,874 3,386 3,340 .02 1 65 13 March 4,021 1.02 ... April May 4,808 8,770 ·55 2·42 8,652 3,479 3,756 4,478 8 46 6 68 4,644 June 4,058 8.14 ... 42,53 5,747 9.38 12.99 12.85 July August 5,628 10.75 4.624 September 8.54 ... 4,204 3,895 October 4,935 3.21 ... November 5.353 45 -26 December 5,052 .33 3.566

1

additional villages affected numbered 1,608. In Singblum 1,750 villages were attacked against 2,016, indicating that the reduction in the area pervaded was large. All these districts without exception also exhibited higher mortality, the increase in Manbhum being the greatest, viz. 2.22 per 1,000 of population. The marginal figures illustrate the

seasonal severity of fever in Chota Nagpore. They show that the incidence of the disease does not exactly follow that of other divisions of the Province, inasmuch as heavy rainfall being associated with high mortality, which continues high till the end of December, and there is a marked fall in January and February, followed by an increase in the Lotter months. The salient points connected with the prevalence of fever in the districts in Chota Nagpore are subjoined.

CHOTA NAGPORE DISTRICTS .- In Hazaribagh the country around the base of the Parasnath Hill was found Incidence of Fever in the districts in Chota Nagporo. to be specially malarious. In Singbhum the localities most noted for fever are the west of the district, including Saranda in thana Chukradhurpur and Turruffs Bhelaipahari and Atkosi in thana Ghatsilla In Manbhum, where fever prevailed to a much greater extent than during some years past, its severity is said to have been felt most on the pilgrim routes in thanas Topchanchi, Govindpur and Nirsha. Next to Toondi, which is not on the pilgrim road and where the mortality amounted to 22.96 per 1,000 of population, the highest death-rates 15.47 and 14.09 per 1,000 respectively were exhibited by Topchanchi and Govindpur; but Nirsha, which lies intermediate between the two first-named thanas, and through which the Grand Trunk Road runs, returned the lowest casualty rate (8.15 per 1,000) compared with all the thanas in the district.

93. The marginal figures indicate the extent of prevalence and fatality

Incidence of Fever in the Port of Calcutta.

Admissions into hospital.

Fever, enteric ... 12 4 1.72
, malarious ... 321 3 1.29
,, simple ... 155 ...

of fevers among the European seamen in the Port of Calcutta during the year under review. Contrasted with the similar data for the preceding year, it is seen that, eliminating simple fever which will be referred to separately, the suffering among

this class of seamen from enteric and malarious fevers was greater, inasmuch

as eight more of them were admitted into hospital for the former malady and 127 for the latter, and the mortality caused by these diseases was higher by 1.13 and .11 per 1,000 of average strength respectively. As regards simple fever, however, a considerably lesser number—189—were admitted into hospital, and, as in the preceding year, no death occurred from it. Among the Native Floating Population only one death from malarious fever, or at the rate of '03 per 1,000 of population against '47 per 1,000 in 1885, was reported to have occurred, and 15 deaths, or at '59 per 1,000, against none, from simple fever. The returns are, however, manifestly defective.

BOWEL-COMPLAINTS.

The marginal figures show to what extent Bowel-complaints prevailed

Extent of prevalence and fatality of Bowel-complaints.

å	Number of deaths.		Percentage of villages affected.				Number douths.	Percentage of villages affected.	
In 1886		55,693	9.70	In	1881	•••	57,029	11.60	
				,,,	1880		44,969	10.14	
,, 1885		63,808	10.69	,.	1879	•••	52,237	10.23	
,, 1884		58,376	10.61		1878	•••	65 282	18.44	
,, 1883	•••	55,270	9.32	,,	1877		58,962	12.18	
,, 1882	•••	61,362	11.71	2.5	1876	•••	58,701	No duta	

and the numbers who succumed to them during the year under review and during the years of the preceding decade. If these statistics can be relied upon, the inference from the comparison is that the maladies in question prevailed to a less extent within

the Province than during any year of the decade referred to, 1883 excepted, and with a less mortality, the years 1879, 1880 and 1883 being excepted.

The urban circles returned 9,106 deaths, or in the proportion of 3.77 per 1,000 of population, and the rural circles 46,587 deaths, or at .73 per 1,000, in opposition Comparative prevalence of Bowel-complaints in the Urban and Rural to 9,382 deaths, or at 4.12 per 1,000 in the former

circles, and 54,426 deaths, or at 85 per 1,000 in the latter, during the preceding year, indicating a sensible diminution of mortality in both circles.

This information is furnished in the margin. It is again seen from the

Seasonal incidence of Bowel-complaints.

			Number of deaths.			Number of deaths.
January		•••	5,126	July		3,891
February		•••	3,862	August	***	4,800
March		•••	3,988	September	•••	4,620
April	•••	•••	4,421	October	•••	4,954
May	,		4,286	November	•••	5,708
June		•••	3,778	December	•••	6,259

figures that the greatest suf-fering from the maladies in question is endured during the winter months, no doubt brought about by the masses being unable to contend against the vicissitudes and inclemencies of this season, being

poor, and badly housed, clothed and fed.

Areas of greatest suffering from Bowel-complaints.

The areas (Districts, Towns and Rural circles), which bore the largest burden of the mortality from Bowel-complaints, were the following:

							_		
DISTRICTS	•		ntio per <i>mulle</i> .	TOWNS.	F	atio por mille.	RURAL CIRCLES.		Ratio per
Balasore Darjiling Howrah Serampore Puri Patna Hughli	•••	•••	4·68 4·65 3·40 2·81 2·65 2·08 2·04	Puri Serampore Jungipur in Murshidabi Balasore Hughli Suburbs of Calcutta Barrh in Patna Darjiling Sewan in Sarun Hajipur in Mozufferpor Patna Gya Narainganj in Dacca Jamalpur in Monghyr Jamalpur in Mymensing Utterpara in Serampore Raniganj in Burdwan	 6	9.76 8.18 7.85 7.15 6.70 6.68 6.39 6.01 5.93 5.62 5.62 5.16 5.15 5.16 5.08	Darjiling Basta in Balasore Dinapur in Patna Balasore	•••	8·52 8·10 6·88 5·81

The Civil Surgeon of Darjiling reports that what is known as hill diarrhoea, was prevalent in the Darjiling station during May, June and July; and with reference to this fact, he observes that it is remarkable that it is only, during recent years that this disease has appeared in the town. "In former years it was one of the advantages claimed for Darjiling as a sanitarium that it was free from this plague of other hill stations." Now diarrhea occurs with seasonal regularity during the early months of the rainy season, when not a household escapes it, and, although rarely fatal, it causes much suffering and discomfort, and, if neglected, seriously undermines the constitution. The cause of the disease establishing itself in the town is not yet known; but I think that increase of population and complete clearance of the forest, with their attendant evils, may have some connection with this change.

99. The Civil Surgeon of Puri notes that he ascertained, by personal investigation, that the pilgrims suffer most from bowel-complaints, and that this is due to the unfavourable circumstances under which they live and

the indigestible food they have to consume while in this district. The Europeans are also seen to succumb to the disease in a short time, notwithstanding that they live as a rule away from the native town in houses on the beach, open to the sea breeze. The cause of dysentery in general is being enquired into; and the Civil Surgeon suggests that the head-quarters of the district be removed either to Pipli or Khurda.

100. A noticeable point with regard to bowel-complaints in the Midnapore district is that there was a reduction in the mortality from these diseases, while there was an increase under the head of cholera. This was almost

general throughout the district, and has also been observed in other localities.

Port of Calcutta.
Prevalence of Dysentery and Diarrhœa. Admissions Ratio per into hospital. mille. Deaths. 1886. 1885. 1886. 1885. 1886. 188**š**. Among European seamen-106 6 1.29 8.54 ... Diarrhoa 185 102 ••• Among the Native Floating population -Dysentery •07 •07 2 .15 40

101. The marginal table furnishing this information indicates with regard to the European seamen that dysentery was less prevalent, as well as less fatal among them than during 1885, and that while the number treated for diarrhea was larger, it was not, as in the preceding relating to the Native Frentier

year, attended with any casualties. The figures relating to the Native Floating Population being manifestly defective, call for no notice.

INJURY.

102. The reported casualties from injury amounted during the year university from Injury.

Mortality from Injury.

mille of population of 43, against 26,263 deaths, or at 39 per 1,000, the mean of the decade 1876-85. That the mortality from this cause should exceed the average of the decade, notwithstanding the fact that large numbers of deaths from drowning and other accidents were added to the figures of the latter period, the result of the cyclones and storm-wave which occurred, once in 1876 in Backergunge, Noakhalli and Chittagong, and again in 1885 in Orissa, I attribute to improving registration.

103. The figures affording this information are given in the margin.

Mortality from different classes of Injury.

	Suicide.				Wou	nds,	Accid	ents.	Snake-bite and killed by wild beasts.	
	 	Deaths 's		Ratio per cent. to total desths from Injury.	hs.	ċ	hs.	٠		.:
	Males,	Fernales.	Total.	Ratio tota Inju	Deaths.	Batio.	Deaths.	Batio.	Deaths.	Ratio.
In 1880 1876-85	946 923	1,740 1,528	2,686 2,441	8.50 8.53	1,557 1,422	5.58 9.41	13,073 12,332	44-95 46:05	11,785 10,068	40°52 38°33

Compared with the outcome of the preceding decade, there was an enhancement casualties under of all the heads, particularly in deaths caused by snakebites and wild beasts. These statistics also show that the rule which prevailed during the decade also

obtained during the year under review, viz., that accidents caused the greatest

loss of life; that the cause of death next in operation was snake-bite and maltreatment by wild beasts; that suicide took the third rank in the death-roll; that the least number of deaths was due to wounds; and that the suicides of women exceeded those of men. The causes have been explained in former reports.

104. It is again observed that the rainy months of June to September,

Seasonal incidence of deaths from when from the flooding of the country snakes and violence.

Wild beasts seek refuge near the habitations of men, produce the largest number of casualties from violence, for during these four months the recorded deaths amounted to 15,870, against 13,211 during the remaining eight months.

105. In the **Port of Calcutta** 15 European seamen met their death from Mortality from Violence in the Port of Calcutta.

Mortality from Violence in the Port of Calcutta.

This number yields a death-rate of 6.45 per 1,000 of average strength, against 5.31 per 1,000 during the preceding year. The Health Officer's report does not furnish the casualties from violence among the Native Floating Population.

OTHER CAUSES.

106. The mortality from causes not specified, but generally grouped under the head of "Other Causes," amounted during the year under review to 190,818, or at the rate of 2.88 per 1,000 of population, against 186,209 deaths, or at 2.81 per 1,000 during the preceding year, indicating an almost equal mortality during both years.

Areas of greatest suffering from mortality from Unspecified Causes.

107. The areas in which the greatest loss of life occurred from the above referred to category of maladies are named below:—

DISTRICTS.	Ratio per mullo.	TOWNS.		Ratio por mille.	RURAL CIRCLES.	Ratio per wille.						
Puri Sarun Backerganj Balasore	. 12:04 . 8:83 . 7:27	Puri Serampore Sewan in Sarun Bhagulpore Suburbs of Calcutta Narainganj in Dacca Kendrapara in Cuttac Jamalpur in Monghyt	:k	16·78 14·96 14·60 14·27 13·40 11·74 10·34 10·19 10·10 9·69 9·17 9·13	Banpur in Puri Khurda in do Chupra in Sarun Mathbaria in Backerganj Gope in Puri Darwali in Sarun Baragaon in do Bhandaria in Backerganj Gopalganj in Sarun Perozpur in Backerganj Jhalokati in ditto Manjhi in Sarun Govindganj in Chumparun Bowphal in Backerganj	25.51 13.53 11.65 11.64 11.27 10.82 10.63 10.59 9.89 9.78 9.78 9.75 9.42 9.33						

Opthalmia in Hazaribagh.

108. The report from Hazaribagh shows that opthalmia was unusually prevalent in the Hazaribagh and Chattra towns.

109. In the **Port of Calcutta** nine European seamen, including five who European Seamen. Were affected out of hospital, were attacked by Mortality from Heat Apoplexy or heat apoplexy or sunstroke; and of this number 6 died, yielding a death-rate of 2.58 per 1,000 of average strength in Port, in opposition to five attacks and four deaths, or at the rate of 2.36 per 1,000, during the preceding year, indicating that, although the number who suffered from the malady was larger, the mortality was lower calculated on the populations of the two years in question, which varied according to the total number present in the Port.

110. There were seven admissions into hospital from scurvy, against 13 in the preceding year, with no deaths in both years. There was thus a satisfactory reduction in the prevalence of the disease. It was found on board of five vessels, two hailing from Liverpool, one from Mauritius, and two from New York. The frequency of the disease in vessels from New York has been alluded to in my Annual Report for 1884. This year enquiry showed that in one of the ships, the "Albyn," the food was ill-cooked, the biscuits bad, and the limejuice inferior. There

was a difference of opinion between the Health Officer and the Shipping Master as to the interpretation of the Merchants' Shipping Act with regard to the liabilities of masters of ships in the matter of the treatment of the crews with reference to food, &c., and it also appeared that the standard of measure by which limejuice should be issued required to be definitely fixed to obviate misapprehension of the quantity denoted by ounces. Both questions were submitted to Government for special orders.

111. For "other diseases" 1,875 seamen, against 1,179 in 1885, were

Mortality from "Other Discases." 1,875 seamen, against 1,179 in 1885, were admitted into hospital; the deaths numbered 40, including six which occurred out of hospital, against 22; and the death-rate stood at 1719 por 1,000 of average strength against 12.99. There was thus a considerable increase both in the prevalence and fatality of these maladies. Of the six deaths out of hospital, one each was caused by diseases of the heart and brain, and these may have been suddenly fatal; but, with regard to the others who died from consumption, pneumonia, and other lung diseases, it is difficult to understand why the sufferers were allowed to die on board.

112. There were returned from among the Native Floating Population

Native Floating Population.

Mortality from "Other Diseases."

23 deaths, or at the rate of '90 per 1,000, from the various maladies coming under the head of "other diseases," against 25 casualties, or at 98 per 1,000, during the preceding year.

SECTION VII.

GENERAL HISTORY OF VACCINATION.

Year of Report.

The particulars regarding Vaccination presented in this Section of my Report belong to the official year 1886-87.

114. Officers in charge of the Vaccination Circles during the year.

The following Officers were in charge of the Vaccination Circles in the Province during the year under review. Calcutta—Surgeon-Major R. C. Sanders from 1st April to 14th May 1886, and Dr. W. J. Simpson during the

Metropolitan Circles-Surgeon J. ffrench-Mullen from 1st April rest of the year. to 7th July 1886; Assistant Surgeon Jadub Chander Ghose, Rai Bahadoor, from 8th July to 24th November 1886; and Surgeon Major Kali Pada Gupta from 25th November 1886 to the end of the year. Darjiling Circle-Surgeon-Major J. J. Wood, throughout the year. Kanchi Circle-Surgeon L. A. Waddell from 1st April to 9th May and from 10th August to 17th September 1886; Surgeon-Major F. R. Swaine from 10th May to 9th August and from 18th September to 23rd October 1886; and Assistant-Surgeon Kassinath Ghose from 24th October 1886 to the end of the year. Sonthal Pergunnalis Circle-Assistant Surgeon Kassinath Ghose from 1st April to 26th June 1886, and Assistant Surgeon Kali Prosonno Ghosal from 27th June 1886 to the end Eustern Bengal Circle-Apothecary A. Lyons from 1st April to of the year. 25th July 1886, and Assistant Surgeon Narendro Nath Gupta from 26th July 1886 to the end of the year. Behar Circle-Assistant Surgeon Mothura Nath Sen throughout the year. Orissa Circle—Assistant Apothecary P. Veeriah Naidu throughout the year.

115. The marginal table exhibits the supervising and operating establish-

Strength of the working Establishment.

			STREN	GTH I	1886	87.		
	3.	Superinten.	Native ents. Vacci-	tors.	-	Appre	ntioes.	nators.
CIRCLES.	Superintendents.	Deputy Super dents.	Inspectors, Native Superintendents, Inspecting Vacci- nators, &c.	Head Vaccinators.	Vaccinators.	Government,	Licensed,	Licensed Vaccinators
Calentta Motropolitan Circles	1 	2 4 1 5	30 2 1 43	 	19 12 2 14		124 124	867 867
Darjling Circle Ranchi Ranchi Scotthal Pergunnahs , Enstern Bengal , Orissa ,	1 1 1 1 1	2 1 	12 15 11 7 2 6	1 1 8 6 8	5 32 42 67 28 43	 30 4 5	189 19 86 212 	204 154 141 215 25 63
Total of Vaccination Circles Municipalities, Dispensaries, &c	8	11	95	21	250 2012	89	642	1,169
GRAND TOTAL	8	1i	95	21	462	89	042	1,205

ment which was actually employed in conducting vaccine operations during the year in the Circles and in Municipalities. In comparison with the working establishment of the preceding year there was an increase of twelve Inspectors in six circles against a decrease of one in one circle; a decrease of one Head Vaccinator in one circle; an increase of 11 Vaccinators in three circles against a decrease of 10 in two; an increase of 685 Licensed Vaccinators in seven circles

against a decrease of 15 in one; and a decrease of 12 Apprentices in two circles. The net increase of establishment is represented by eleven Inspectors, one Vaccinator and 670 Licensed Vaccinators; and the net decrease by one Head Vaccinator and 12 Apprentices. The causes of these changes were:—Inspectors.—Two Inspectors were sanctioned for and employed in the Eastern Bengal Circle owing to extension of the Licensed system of vaccination, but the Pubna Inspector was transferred to Darjiling and this *accounts for the increase of one Inspector only. For the same reason two Inspectors were appointed in the Behar Circle. The additional Inspector in the Darjiling Circle is the

one who came over with the transfer of the Pubna district to this circle. Seven Vaccinators were made Inspecting Vaccinators in the Ranchi Circle. Three Inspectors were employed in the Sonthal Pergunnahs Circle on the extension of the Licensed vaccination system in it. One Inspector was appointed in the Boyine vaccination establishment in the Suburbs of Calcutta on the re-organization of its establishment. One Inspector was dispensed with in the Suburban Municipality owing to the amalgamation of the Ekbalpur with the Watgunge and the Cossipur with the Chitpore thanas. Head Vaccinators.—The Head Vaccinator of the Bovine vaccination establishment in the Suburbs of Calcutta was dismissed, and this accounts for the reduction under this head. Vaccinators.—Two additional Vaccinators appear to have been employed in the Orissa Circle, but it is not stated under what circumstances. Three Apprentices were made Vaccinators in the Ranchi Circle to fill up vacancies caused during the preceding year. The requirements of the year necessitated the appointment of six Vaccinators in the Municipal Area. The services of nine Vaccinators in the Eastern Bengal Circle were dispensed with and their places not filled up. The post of one Vaccinator was done away with on the re-organization of the Bovine vaccination establishment in the Suburbs of Calcutta.

Licensed Vaccinators.—The requirements of the year necessitated the appointment of 110 additional Licensed Vaccinators in the Metropolitan Circles, 15 in the Ranchi Circle, and 16 in the Municipal Area. Extension of the Licensed system of vaccination involved an increase of 146 Licensed Vaccinators in the Sonthal Pergunnals Circle, 178 in the Eastern Bengal Circle and 13 in the Orissa Circle. The increase of 207 Licensed Vaccinators in the Darjiling Circle is represented by the transfer of 28 of these men from Pubna, and the entertainment of 188 Apprentices, against a reduction of nine Licensed Vaccinators, who, although in the list of last year, did not practice this year. services of 15 Licensed Vaccinators appear to have been dispensed with in the Behar Circle, but the reason has not been furnished. Apprentices.—The retention of four Apprentices in the Eastern Bengal and of eight in the Behar Circle was abolished.

The female vaccinator entertained in Calcutta in 1884 continued to work during this year. The services rendered by her will be referred to hereinafter. 116. A notice of those of the Vaccination Establishment who are favourably mentioned in the local reports and of those who Conduct of Establishment. were punished for grave misconduct, and a table showing the number of those who committed minor misdemeanours, and the punishment awarded them, are subjoined. The conduct of the rest was good.

Good conduct .- Assistant-Surgeon Ram Chandra Mitra, Deputy Superintendent of Vaccination, Catcutta, is reported to have carried on his duties in a most praiseworthy manner, and to be thoroughly deserving of some recognition for the good work he has done. Inspector Hari Charun Bancriee of the Southal Pergunnals Circle is reported to have displayed marked energy in assisting the cause of vaccination, as it was through his exertion that 1,118 re-vaccinations were effected—a matter which must in the future engage special atten-Head Vaccinator Mohim Chandra Bhumick and Vaccinators Emamuddin Bhuia, and Akhoy Kumar Dass of the Eastern Bengal Circle performed their duties well and energetically throughout the season under many hazardous circumstances, such as crossing rivers, khals, insecure bridges, &c. They have been promoted to higher grades respectively.

Gross misconduct.—Suburbs of Calcutia.—Head Vaccinator Gowri Prosad Sing was dismissed for bringing false charges against the Superintendent. Darjiling Circle—Inspector Sakatullah was fined Rs. 15 for taking a bribe from a Licensed Vaccinator. Ranchi Circle—Native Superintendent Mahabir Porsad was found guilty of insubordination, disobedience of orders and submitting false returns, and was degraded and debarred from promotion. Vaccinator Miter Bhan Sing overcharged fees and absconded, and Vaccinators Khursed Ally and Bhagwan Persad overcharged fees; the first of these vaccinators was dismissed and the two others fined. Native Superintendent Mahomed Ali and Head Vaccinator Luchman Sahay were found guilty of, and dismissed for, disobedience of orders and neglect of duty. Sonthal Pergunnahs Circle.—Inspectors Aughore Nath Sircar, Darikanath Mitra and Thakoordas Sircar were found to have accepted illegal gratifications. The two former were suspended, and the case of the last

is under consideration. Head Vaccinator Wooma Churan Gupta was fined for idleness and neglect of duty. Vaccinators Woomesh Chandra Chunder, Nootbehari Das, Baroda Chandra Dutt and Bhutnath Bose were also found guilty of taking illegal gratifications and punished, the first by suspension for six months, the second by degradation, and the two last by dismissal. Eastern Bengal Circle.—Inspector Tomizuddin was charged with taking an illegal gratification. He is under suspension pending enquiry into the case. Behar Circle.—Head Vaccinator Dabee Sing was degraded for working in an area other than that assigned to him, and for persisting to do so although fined. Among the Licensed Vaccinators inoculating instruments were found in the possession of Jhungir Mally; Baboo Ram Mally was found drunk and was insubordinate, and Palut, Fazdar, Boolakee, Luchman, Churamun and Shiobaluk Mally were absent. The licenses of these men were withdrawn. Apprentices Topy Mally and Bunsi Lall were dismissed for being absent without leave. Orissa Circle.—Vaccinator Venke Sewamy was dismissed for misappropriating Rs. 5-10, the pay of a Vaccinator which was entrusted to him to deliver. He was also prosecuted and was sentenced to three months' rigorous imprisonment and fined the amount misappropriated. Vaccinators Mothoori Mohun Achargia and Brojo Behari Sen Gupta were dismissed for refusing to proceed to stamp out small-pox, and Vaccinator Anunda Mohapater was degraded for insubordination and bad work.

Minor misdemeanours.—The punishment awarded for this class of offences are exhibited in the subjoined table:—

			CTOR	в.	(IFA	TEN. Inst		ING	VAG	JIE	AD ATOI	RB.	VAC	CIN.	A TOR	s.			ATOI		ΛP	PREN	TICE	e e.
Circi es.	Warned.	Fined.	Degraded.	Dismissed.	Warned.	Fined.	Degraded.	Dismissed.	Warned.	Fmed.	Degraded.	Dismissed.	Warned.	Fined.	Degraded.	Dismissed.	Warned.	Fined.	Degraded.	Dismissed.	Warned.	Fined.	Degraded.	Dismissed.
Calcutta Metropolitan Darjiling Rauchi Southal Pergunnahs Eastern Bengal Beliar Orissa	1						ï			 2 6 	2		5 2 2	12 2 11 19 25 3 6	5	1 2 18 	12 	15	8	11 8 		2		13

The areas which were to be taken up for vaccination during the 117. year under review in each Circle were determined upon before the commencement of the working Areas vaccinated, and plans which determined the conduct of Operations in the Vaccination Circles. season under sanction from this office. points kept in view in the plan of operations to be adopted, were that defined areas, contiguous to each other as far as possible, admitting of proper supervision, and calculated to secure the thorough protection of the areas traversed with due reference to the birth-rate of the year and to the accumulated births of former years, should be taken up; and that the staff to be employed on the work should be adequate, judiciously distributed, properly supervised and systematically worked. The exact areas in which operations were carried on during the year will be found exhibited in Appendix VII, Table A, to this Report. I will refer here to these areas only in a general manner, and indicate the staff which was employed for carrying on the work in each circle, and the results achieved by it. In Calcutta vaccination was carried on in the whole town consisting of 18 thanas; the staff employed consisted of 19 vaccinators, of whom one was a female, under the supervision of the Superintendent, the Deputy and Assistant Superintendents and three Head Vaccinators, and the total operations performed amounted to 10,563 against 12,365 in the preceding year. Metropolitan Circles operations were carried on in all the 11 districts comprising it, by 367 Licensed Vaccinators, aided by 124 Apprentices and supervised by the Superintendent, four Deputy Superintendents and 39 Inspectors. They performed 374,390 vaccinations, which exceeded the number of the preceding year by 1,043. The usual plan was followed, all the thanas in the Circle being taken up for

operations simultaneously, and each vaccinator working in half of his assigned area, leaving the other half to be gone through next year, so that his earnings may not be curtailed by paucity of subjects. The work was commenced in September, but, owing to the districts being more or less under water, very little vaccination was performed in that month. In the Suburbs of Calcutta, comprising 14 thanas and the Cooly Depôts, the operating staff consisted of 14 paid Vaccinators under a Deputy Superintendent and three Inspectors, and the vaccinations performed numbered 14,337 or 293 in advance of the number of Vaccinations performed numbered 14,337 or 293 in advance of the number of 1885-86. In the Darjiling Circle thanas Darjiling, Kurseong and Kalimpong were assigned to the Government agency, and all the thanas in the Rungpur, Bogra, Rajshahye, Dinajpur, Purneah, Maldah, Jalpaiguri and Pubna districts, and the Darjiling Terai to the Licensed agency, where they performed 11,744 and 278,547 operations respectively, being in excess of the work of the preceding year by, on the whole, 37,729 operations. The Government establishment in the Darjiling hills consisted of five paid Vaccinators under the Superintendent and one Head Vaccinator, and the Licensed agency of 204 Vaccinators with 188 Apprentices under two Deputy Superintendents and 12 cinators with 188 Apprentices under two Deputy Superintendents and 12 Inspecting Officers. Ranchi Circle.—To the Government agency, consisting of 32 paid Vaccinators, supervised by the Superintendent and two Native Superintendents and one Head Vaccinator, were allotted the Kolhan in Singbhum and nine thanas in Lohardugga, and the *Licensed* agency, composed of 154 Licensed Vaccinators, aided by 19 Apprentices and supervised by the Deputy Superintendent, five Inspectors, one Native Superintendent and seven Inspecting Vaccinators. nators took up 15 thanas in Hazaribagh, 11 in Lohardugga, 15 in Manbhum, five in Singblum and the Political Estates of Sirguja, Jushpur, Gangpur and Bonai. The Government agency performed 30,125 operations and the Licensed agency 139,260, showing a decrease on the side of the former of 36 vaccinations against an increase on the side of the latter of 42,995, culminating in a net increase of 42,959 vaccinations as compared with the outturn of the preceding year. The areas in the Kolhan in which vaccination was conducted this year had not been visited for the last three or four years, and it is reported that an unauthorized vaccinator, but known to the people, carried on operations in thana Ghatsilla in Singbhum, having been allowed to do so by the local police officer. The case was reported to the Deputy Commissioner of Singbhum and was under investigation. In the Sonthal Pergunnahs Circle, the Government agency were made to undertake the vaccination of 2 thanas in Bhagulpur and nine in Monghyr, their strength consisting of 42 paid Vaccinators under the Superintendent, two Inspectors, two Inspecting Vaccinators and three Head Vaccinators, and the *Licensed* agency that of two thanas in Monghyr, 12 in Bhagulpur and 14 in Sonthal Pergunness discrete, with 141 Licensed Vaccinators aided by 86 Apprentices and supervised by the Superintendent and seven Inspectors. The Government agency performed 69,900 vaccinations and the Licensed agency 74,013, which compared with the work of the preceding year give an increase of operations for both agencies of 13,184 and 16,190 respectively. The plan of operations observed by the licensed agency was quite in opposition to the instructions on the subject issued from this office. It was desultory, scattered and partial. In the Eastern Bengal Circle the Government agency were charged with the vaccination of 10 thanas in Backergunge and (for the establishment of lymph only,) the Keranigunge thana and Dacca town and the Licensed agency with that of the entire districts of Mymensing, Dacca, Tipperah, Faridpur and Noakhalli and four thanas in Backergunge. In the former area 67 paid Vaccinators assisted by 30 Apprentices and supervised by the Superintendent, one Native Superintendent and six Head Vaccinators were employed, and in the latter 215 Licensed Vaccinators with 212 Apprentices under the Deputy Superintendent and six Inspectors. The vaccinations effected by the Government agency amounted to 188,662 being 114,155 in excess of those of the preceding year, and by the Licensed agency 198,619, the comparative result being a diminution of 12,906 operations; but the increase over-balanced the decrease by 101,249. Under orders of Government No. 2117T-M of the 7th October, the Pubna district was transferred from this to the Darjiling Circle. Vaccination was extended for the first time this year to the mainland of the Backergunge district, that is to thanas Gourandi, Mendigunge, Sarupkati, Jhalokati, Nulchiti, Barisal and Backergunge. In the Behar Circle 11 thanas in Shahabad,

and six thanas in Patna (during the recess,) were assigned to the Government agency, consisting of 43 paid Vaccinators and five Apprentices supervised by the Superintendent, two Native Superintendents and four Head Vaccinators and to the Licensed establishment, composed of 63 Licensed Vaccinators and 13 Apprentices supervised by the Superintendent and four Inspectors, the Patna district and six thanas in Shahabad. In the former area 33,696 persons were vaccinated and in the latter 32,043, both areas showing an excess of operations, viz., of 8,268 and 10,293 respectively. The Licensed system of vaccination was extended during the year to thanas Arrah, Peeru, Dhungain, Belowti, Buxar and Dumraon in Shahabad. In the Orissa Circle three thanas in the Cuttack district, two thanas in Puri, the Government Estate of Angool and the Political States of Baramba, Mohurbhanj and Nursingpur were assigned to the Government agency, composed of 28 paid Vaccinators aided by four Apprentices and supervised by the Superintendent and three Head Vaccinators. They performed 52,176 operations, which is less than those of the preceding year by 2,583. The Licensed agency took up six thanas in Cuttack. This agency consisting of 25 Licensed Vaccinators under the control of the Superintendent and three control of the Superintendent and three Inspectors performed 14,101 vaccinations which exceeds the number of the preceding year by 11,179. Setting the above decrease against the increase the net increased outturn of work is represented by 8,596 operations. Thanas Salipur, Kendrapara, Patamundi and Aul in Cuttack were for the first time taken up by the Licensed agency.

118. The Municipal Area in which vaccinations were carried on during the Areas vaccinated and plans which determined the conduct of Operations in the Municipal Area.

Year embraces 43 Sudder Municipalities, 91 outlying Towns, 4 Cantonments, 19 Dispensaries, 7 Jails and five other places. Within this area 88,101

operations were performed against 84,822 in the preceding year, as per details furnished in the margin.

AREAS.		umber of perators.	Number of perform	Operations ned in
	•	perators.	1986-87.	1885-86.
Sudder Municipalities		91	46,765	44,937
Outlying Towns		105	29,507	81,591
Cantonments		4	1,563	1,244
Dispensaries		23	3,560	4,028
Jaila		7	283	260
Other places		18	6,423	2,762
-			-	
Total		248	88,101	84,822

details furnished in the margin. The jails referred to are those in the Jessore, Jalpaiguri, Faridpur, Mymensing, Noakhali, Shahabad, and Chumparun districts, and the other places consist of Saidpur, (Northen Bengal State Railway in Rungpore), the Udulia and Chandpur Tea Estates in Chittagong, and

the Dhenkanal and Bishapara Estates in Cuttack. The Darjiling municipal vaccinator was also employed in the neighbouring tea gardens whenever the managers thereof needed his services. The vaccination in the Tea gardens in Chittagong was arranged for by the managers and carried out by a Hospital Assistant. In the Dinajpur town a good plan was followed in seeking for subjects for vaccination, which is worthy of imitation generally. House to house enquiry was made to ascertain the number of unprotected cases, and operations were carried out as unprotected cases were found. In pursuance of this plan 488 houses were visited, and out of 2,169 inmates only 90 of all ages were found unprotected. The children of the zillah and model schools were also inspected, and out of 400 boys only 10 or 12 were found not to have been vaccinated. This enquiry is still being carried on. An endeavour was made to introduce vaccination into Cox's Bazar, but the result was unsatisfactory, due to the facts that there were several changes of Medical Officers and that the natives of the sub-division being chiefly Mughs, are difficult to deal with.

119. Calcutta.—The Superintendent reports that the protection afforded to Degroe of protection afforded to the this town is as thorough as possible, but subject to the Caccination Circles.

the drawbacks reported last year. The extent to which the districts, thanas, &c., comprising the Metropolitan Circles have been protected is shown below. Thoroughly protected.—All the 11 districts composing this division, viz., Jessore, Khulna, Nuddea, 24-Pergunnahs, Murshidabad, Birbhum, Hughli, Burdwan, Howrah, Bankura and Midnapur, with the exception of the undermentioned areas, which are either partially or entirely unprotected.—In Bankura, 40 villages in thana Onda, 50 in Bankura, 62 in Gungajulghati, 52 in Khatra and 70 in Raipur. In Midnapore, 100 villages in thana Contai, 45 in Egra, 200 in Sabong, 40 in Bhugwanpur,

30 in Potaspur, 150 in Khedgiri and 350 in Raghunathpur. Entirely unprotected.—In Jessore, three villages in thana Lahagurrah, two in Mahomedpur and a few families of Ecchaghur and the Bhagwanis who leave everything to God. In Khulna, 4 villages in thana Morelgunge, 1 in Mollahat, one-eighth of the Ferazi Mahomedan population in thanas Morelgunge, Bagirhat, Mollahat, Rampal, Dumuria, Khulna, Bytaghatta and Pikegatcha and a few Eccha families, and Bhagwanis in thanas Magura and Kaligunge. In 24-Pergunnahs, five villages in thana Kulpi, half of two villages in Joynuggur, two villages in Tollygunge, one-fourth of one village in Bistopore inhabited by Ferazis, and 110 Mahomedan families in thanas Deygunga and Baraset. In Nuddea, one village in thana Kotwali, two in Kissengunge, three in Chupra, one in Meherpore, two in Tehatta and one in Gangni. In Murshidabad, three villages in thana Khurgram, one in Kalliangunge, two in Dewanserai, four in Mirzapore, two in Raghunathgunge and three in Suti. In Birbhum, one village in thana Nulhati and three in Mouressur. In Howrah, one village in thana Dumjur inhabited by Eccha families and one in Juggutbullubpore inhabited by In Hughli, one village each in thanas Goghat and Singoor and two in Kristonuggur inhabited by Eccha families. In Burdwan, two villages in thana Bood-Bood, one in Gangoor and two in Ausgram inhabited by the same class, and half of one village in the first named thana where vaccination is In Bankura, seven villages in Bishenpore thana, three in Kotulpore, one in Indas and two in Sonamukhi. In Midnapore, 11 villages in Tumluk, 12 in Nundigram, 24 in Sootahatta, nine in Midnapore, 50 in Narainghur, 25 in Dantoon, 100 in Sabong and 14 in Panchkura. The local testimony, out of the Vaccination Department, on the extent of protection afforded to some of the districts in this circle will be gathered from the following observations. Mr. Oldham, the Magistrate of Burdwan, reports that so far as he observed during his tour, he found the people of his district well protected by vaccination. Mr. Lee, the Officiating Magistrate of Midnapore, reports that vaccination appears to have made satisfactory progress in the district. Magistrate of Murshidabad observes that vaccination has much improved this year as was ascertained by an examination of the pupils of many primary schools all over the district. The Civil Surgeon of Khulna reports that there are many villages in the Bagirhat sub-division and certain limited religious communities in the Satkhira sub-division yet unprotected. The Suburbs of Calcutta is said to have been well protected, except with regard to the non-permanent residents. The extent of protection afforded may be judged from the fact that while cholera, fover and other diseases were committing great havoc in the Municipality during the year there was no mortality from small-pox. Darjiling Circle.—With regard to protection afforded the Superintendent reports in connection with the Government agency area, (vide paragraph 117), that all parts thereof are partially, and no part thoroughly protected owing to the rapidly changing character of the population; and with regard to the Licensed agency areas (vide paragraph 117) that they are more or less thoroughly protected, implying that none of them are thoroughly protected. But turning to local opinion it is seen (1) that Mr. Sharp, the Magistrate of Maldah, reports that vaccination has spread very successfully throughout his district, and that the only thing the people object to is the pressure put upon them by the Vaccination Department to attend with their children at distant and inconvenient places; (2) that it was noticed in the Purneah Jail that, contrary to the experience of past years, many younger prisoners had vaccination marks on their arms which evidences progress; and (3) that the Joint Magistrate of Kurseong observes that in his sub-division "vaccination is employed as a projective in a sporadic fashion all throughout, including the Terai." While no part of the Ranchi Circle has been left untouched, the Superintendent is of opinion that the supposed thorough protection of some portions is far from real. The following areas have, however, advanced far in this direction and may be considered as very nearly thoroughly protected. In Hazaribagh than a Kharakdiha. In Lohardugga than a Khunti, Kera, Sesoi, Lohardugga, Chainpur, Mandar and Ranchi. In Manbhum, than as Purulia, Manbazar, Ichagurh, Gourandi, Govindpur and Nirsha. In Singbhum thanas Scraikela Khursona, Chakardharpur and Chaibassa. In the Political Estates, Surguja and Jushpur. The rest of the areas in this circle have been partially vaccinated. In the Sonthal Pergunnahs Circle the whole of the districts of Bhagulpur, Monghyr and Sonthal Pergunnahs are reported to have been thoroughly vaccinated with the exception of four villages in than Shaikhpura in Monghyr, one each in than Madhepura and Sultangunge in Bhagulpur, and one each in than Jamtara and Dunka in the Sonthal Pergunnahs which have not yet been touched. From the enquiries of the District Superintendent of Police of Monghyr it, however, appears that a good deal more work is required in his district before satisfactory protection can be said to have been afforded. In the Eastern Bengal Circle the districts and than marginally

Thanas. Districts. Bhola Dacca Mymensing Barhanudi ... In Backer-Tipperah Sarupkati Cournadi Faridour Noakhali Backergunge ... Mendhigunge ... Jhalokati Barisal Nulchitti

named are reported to have been thoroughly protected. To these may be added the Pubna district transferred to the Darjiling Circle. On the other hand the whole of Chittagong and thanas Perozepore, Golachipa, Gulshakhali and Matbaria and parts of thanas Bophal, Bhandaria and Patuakhali in Backergunge have not yet been touched. It was ascer-

tained that only 9.72 per cent. of the total admissions into the jail and 37 out of 606 pupils in the schools in Faridpur were found to have been unprotected. With regard to Chittagong the Civil Surgeon reports that the Municipality is in an unprotected condition, but I trust that the introduction of Act V (B.C.) of 1880 will remove this unfortunate state of matters. No part of the Behar Circle is considered to have yet been thoroughly protected, while the districts of Gya, Sarun, Mozufferpore and Durbhanga, part of Chuinparun, and a few villages in Patna and Shahabad have not yet been vaccinated. The rest of the area in the circle has been partially vaccinated. The Superintendent states that it is not easy to protect this circle thoroughly as the opposition to vaccination is great. He advocates the introduction into the circle of a compulsory vaccination law which he considers the only effectual means of overcoming the difficulties. The report from the Orissa Circle is to the effect that thanas Jappur, Dhurmsala, Salipur, Kendrapara, Patamundi, Aul, Cuttack, Juggatsingpore, Tirtol and Banka in Cuttack have been thoroughly protected—some new born children, some high caste people, and some remote places excepted; that the untouched places are the Soro, Baliapal and Basudebpore thanas in Balasore; and that excluding the abovementioned areas, the rest of the circle has been partially protected. 120. The report of this year affords the following facts under this head. The

Degree of protection in the Municipal Area. towns thoroughly protected are Bankura, Brahmanberia, Colgong and Ramjibunpore; Rajmehal all, excepting five children of tender years; Deoghur and Sahibgunge all, excepting children of tender years; Bariepore all, excepting six or eight Ferazi families; Ghatal all, excepting those living in a few blocks of houses in village Konnagur; and nearly all Bogra. In the Howrah town the resident population has been almost wholly protected, but the floating population, consisting of Hindu and Mahomedan coolies, cannot be reached owing to constant changes. Similarly, the Barrackpore Cantonment cannot, owing to its floating and changing population, be kept thoroughly protected. With regard to the unchanging population, be kept thoroughly protected. With regard to the unprotected children in the Sahibgunge town, above alluded to, it appears that a proclamation had been made by the Municipality to the effect that it is optional with parents and guardians to vaccinate or not children under one year of age. Such a proclamation to ignorant people was sufficient to deter them from presenting such children for vaccination. I may here mention that a suggestion has been put forward by the Superintendent of Vaccination, Eastern Bengal Circle, viz., that as Jhalokati and Nulchitti are flourishing commercial towns, where there is a great influx of outsiders, that the vaccinators should, on the arrival of boats to the stations, board them and forthwith vaccinate the unprotected. The Chairmen of these Municipalities, to whom this suggestion was made, have approved of it.

Rungpore Kushtea Chagdah Beernagore North Barrackpore North Dum-Dum Kotechandpur

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Jamalpore in Monghyr. Sherpore in Mymensing. Kissengunge. Goalundo. Madaripore. Naraingunge. On the other hand it is reported that the towns named in the margin have received partial protection by vaccination, and that all the rest of the Municipalities have had intermediate stages of protection afforded them from fairly well to very partial.

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As usual humanized lymph was prepared during the recess in all the Vaccination Circles and distributed in the several

Sources and character of the Lymph areas to commence operations with. In the Metemployed during the year. ropolitan Circles, however, bovine lymph in tubes

was distributed to the Inspectors of Vaccination for the establishment of virus in their respective jurisdictions, and when established, it was propagated by the arm to arm process. A similar procedure was observed in the Orissa Circle; but here humanized and English lymph were also employed for this was as usual supplied with humanized lymph This office all the Vaccination Circles and with bovine lymph in addition by the Metropolitan and Orissa Circles. Both kinds of virus and, in addition, lymph received from England, were distributed by this office almost throughout the year to the Municipalities, Dispensaries, &c., in the Province, and to the following places, out of it, on special application, viz., to Dubri, Nowgong, Sibsagar, Sylhet, Cachar, Naga Hills, Cooch Behar, Bhutan, Indore, Jeddah, Munipur, Port Blair, Charikhur, in Central India, and some places in the North-Western-Provinces and Burma. To these places 2,199 tubes of humanized lymph, filled locally, 93 tubes of English lymph, and 2,600 tubes of bovine lymph and 744 vaccine crusts were suppiled. Although humanized and English lymph failed in many intances, yet, on the whole, they were generally successful. The results with bovine lymph are mentioned in the next para-Observing that non-success attended the earlier trials of both bovine and humanized in many cases, crusts were issued by this office in order that the vaccine operations of the year might not be delayed. It appears also that crusts were freely used in the Hazaribagh District, in parts of Lohardugga, and in the whole of the Political Estates, chiefly for want of vaccinifers, as the people absolutely refused to part with lymph from their childrens' arms.

122. The depôt for the supply of bovine lymph is situated in the Suburbs of Calcutta and is supervised by the

Production and employment of Bovine Lymph. Superintendent of Vaccination, Metropolitan Circles. Here 238 calves were vaccinated during the year,

46 for the Suburban Municipality, 64 for Government, and 128 for the Calcutta Corporation. All these calves were successfully vaccinat d without a single failure or doubtful case. Since the inauguration of the scheme and up to the close of the year under review 896 calves have been operated on. There are four public vaccine stations in the town and eight in the Suburbs, and all were supplied with calves regularly. For the supply of calves to the town and for the services of four coolies to convey them to the stations and to look after them, the Calcutta Corporation pay Rs. 59 per mensem. depôts are well attended on the convings when calves are expected, indicating that the scheme is well appreciated, and this is particularly the case with Europeans, Eurasians and intelligent Hindus and Mahomedans, who prefer vaccination with virus from calves to all other modes of protection. The lymph in tubes was used in starting vaccination in the districts which comprise the Metropolitan Circles, and was supplied plentifully to the Sanitary Commissioner for distribution in the mofussil, and to other applicants. way, 7,624 tubes of the virus were issued from the Animal Vaccination Depôt.

Calf vaccination for the supply of virus was introduced this year into sa. The employment of bovine lymph in the Cuttack town having proved very satisfactory, a trial was made with 10 tubes of lymph from calves vaccinated by the Superintendent of the Orissa Circle. This trial having proved a failure, a second attempt was made. A supply of virus in six tubes was sent from this office towards the end of September. A calf was vaccinated with this lymph in 17 points and with humanized lymph in 3 points. The former proved successful, but not the latter. Encouraged by this success, the process was continued, and 24 calves were successfully vaccinated up to the 31st March, and vaccination with virus direct from the calves and by transmission by the arm to arm process was carried out. The results of the measure will be hereinafter mentioned. Moreover, a vaccinator with a vaccinated calf was sent to the Balasore town to establish calf vaccination there, and several places were supplied with bovine lymph. The Civil Hospital Assistant, Meer Koomar Ally, who conducted the scheme, and to whom great credit is due, suggests that, considering the satisfactory results obtained from bovine lymph and the difficulties

experienced in obtaining humanized lymph in Cuttack, where parting of the virus from the arms of children is most strongly opposed, a depôt be established for the supply of bovine lymph to the entire circle. The Civil Surgeon supports the Civil Hospital Assistant's view of the subject, and notes that the scheme has placed at command an unlimited supply of lymph, by which not only the objection by the people to part with lymph from their childrens' arms, the great difficulty in the way of progress of vaccination has been overcome, but that, what is more important, the virus is certain and effectual, so that failures are now almost nil. The Superintendent of the Orissa Vaccination Circle also vaccinated three calves with bovine lyn ph obtained from Calcutta and one calf with English lymph. Both the operations produced several good and genuine vesicles. and the virus thus obtained was employed in vaccinating subjects in Cuttack, and then stored in tubes and distributed to the vaccinators to commence operations within their several jurisdictions. Satisfactory success attended the measure as will be presently shown. A beginning in bovine vaccination was also made in the Sonthal Pergunnahs Circle. Calves were vaccinated in the sub-division of Pakour. and a Mahomedan vaccinator vaccinated many children with the virus taken directly from them. The results are said to have been satisfactory, and the character and quality of the vesicle raised typical. The cause which originated the scheme was novel. As cows were dying in numbers from small-pox in the abovenamed sub-division, the people requested the vaccinator to vaccinate their This was done, and it is said that the vaccinated animals cows and bullocks. did not contract the disease subsequently. The operation was commenced with virus taken from the arm of a child vaccinated with humanized lymph and the virus in the vesicles which were thus raised was transmitted from animal to animal. Statements of this kind must, however, be received with great caution. The Civil Surgeon of Balasore having, as above stated, obtained a vaccinated calf from Cuttack, is making arrangements for carrying on vaccination with virus taken direct from calves. The Civil Surgeon of *Puri* has had a Hindu compounder trained under the Superintendent of Vaccination, Orissa Circle, in vaccination both by humanized and bovine lymph, with the view of starting calf vaccination in the town. His object for adopting the scheme is not only to maintain a ready and continuous supply of virus, but also to promote vaccination by having always in hand fresh lymph.

123. The subjoined table exhibits the number of vaccinations which were Operations performed with Bovino performed during the year with bovine lymph and Lymph, with results. The figures do not include those of the areas, specially municipal, where it was manifest that due attention had not been paid to the subject, and where the earlier trials having proved unsuccessful further ones were abandoned:—

DESCRIPTION		Tot	tal	MART.	RB-VACC	INATION.	Рвиски виссевав	TAGE OF UL CASES.
OF VIRUS.	CIRCLES.		ed. Tutal number	Number successfully vaccinated.	Total number vaccinated.	Number successfully vaccinated.	Primary.	Re-vac- cination.
Direct from Calf	Calcutta Contral Depôt Nuburbs of Calcutta Orissa Sonthal Pergunnahs	1	,547 2,083 465 46 ,420 1,148 173 173 117 117	1,115 170 117	504 419 281	87 61 86	86°55 100° 78 79 93°26 100°	17:26 16:80 32:82
	Total	***	,771 3,567	8,214	1,204	234	91.64	20.72
With Calf lymph an Tubes	Darjiling		67 169 374 73 73 50 914 847 1,647	45 80 356 46 15 778	******		67:16 47:33 95:18 69:01 80:00 85:12	
By Transmission of Calf. lymph { by Arm to Arm.	Calcutta Metropolitan Nuburbs of Calcutta Darjiling Esstern Bengal Orissa Southal Pergunnahs Hehar Municipalities	874, 12, 1, 12, 15,	443 8,920 69 69 648 1,648 500 12,506 615 14,497 445 445 269 4,259	7,070 378,357 8,388 67 1,648 11,579 14,412 438 3,944	300 24 3,523 1,119	13 17 1,673 1,056	93°19 99'75 98'04 94'20 100 92 54 90 48 98'87 92'60	5.60 65.88 58.47 94.46
	Total	420,	861 424,294	490,903	5,067	2,769	99.44	62.18
	Total of Vaccination orroles	430,	596 424,895	420,715	6,261	2,091	99.38	55-73
1	Total of Municipalities	5,1	183 5,178	4,722	10	10	91.28	100
	GRAND TOTAL	435,	779 429,568	485,437	6,271	3.001	99.20	55.83

The above table is defective in the following respect: viz., that under the head of "by transmission of calf lymph by arm to arm," the operations exhibited for the Metropolitan Circles viclude those performed with lymph in tubes, as the details of the two classes of operations were not kept separately. The vaccinations under the latter head were, however, very small, and cannot affect either way the results under that head. I have nothing to add with regard to the above record to what I stated on the subject in my last year's report; for again, with greatly extended operations, the results realized by vaccinating direct from the calf and by the second transmission of the virus were eminently satisfactory, and that those obtained by the employment of lymph stored in tubes were, on the whole, as fair as in 1885-86. But, considering that when this lymph is extensively used it results in success and that limited and sporadic trials end in disappointment, I am satisfied that its application to bodies of men such as soldiers, convicts, &c., would prove useful.

124. Out of the areas named in the foregoing table, the non-success of vacciLocal opinion on the value of Bovine nation with bovine lymph in tubes was almost
general, particularly in Municipalities, and specially
in the minor ones. The want of success in Municipalities is an expected event,
for vaccination in most of them, whether with bovine or humanized lymph,
is conducted in a perfunctory manner. The reported general causes of the inertness of the virus were the same as those which have been mentioned in my
Annual Reports of past years and need not be recapitulated here. But chief

	Kept in h	of tot	rrentages success to al number tecinated.		
For	2	days		***	84
,,	4.	,,			7 9·2
,,	6 to 8		•••		72
,,	9	,,		• • •	71
,,	11	"	•••	•••	70
,,	11 to 5				74
,,	100 to 2				66
,,	500 to 6		•••	•••	38
,,	700	,,	•••		5∙5

among them is deterioration caused by delay in transit to its destination. On this point, I beg to present the marginal figures obtained from the National Vaccination Establishment (Dr. Cory), London, lately ascertained but not yet published, regarding the results of bovine lymph stored and kept in hand for different periods before use, and to state, with

regard to the lymph issued from this office, that it is always received from the Metropolitan Circles by about 12 o'clock of the day on which it is put in the tubes, issued by this office on the same day, and reaches its destinations within two to six days. Under this arrangement the mean percentage of success achieved, taking all vaccinations, whether altogether and partially successful, or nonsuccessful, into account, was 88.94. I regret that detailed data are not available for comparison with the English figures. In this connection I should, however, mention, in illustration of the of the connection above made to the effect that failures are a consequence of want of care in, and attention to the subject, that it is most remarkable that the reports from distant places, such as Manipur, Nepal, Cooch Behar, Naga Hills, Cachar, Sylliet, Dhubri, to reach which greater time is occupied, show that the operations with bovine lymph were uniformly and altogether successful, while in places in Bengal, accessible by rail, the results were a failure. For the above reasons it appears to me that delay is not so much to blame for non-successes as faulty application and storing. 1 shall submit observations on the latter point further on. I now propose to record some well considered opinions on the subject under discussion. The report from Culcutta shows that, although personally looked after with care by the Deputy Superintendent, bovine lymph did not yield the same percentage of successful cases as arm to arm vaccination, and that the vesicles invariably ran a slower course, and, considering their age, were smaller than those produced by humanized virus. Metropolitan Circles.—Dr. Gupta reports that calf lymph in tubes was exclusively used in starting the operations, and, after a few failures in some places, it succeeded everywhere. The character of the lymph he says was good. He, however, admits that the lymph when sent in tubes to distant places decomposes and loses its virility in accordance with the temperature of the The experience in the Darjiling Circle goes to show that although the operations with bovine lymph direct from the tubes failed in the great majority of cases in which it was employed, arm to arm vaccination with this virus, when once established, proved invariably successful. The Superintendent of Vaccination Sonthal Pergunnahs Circle, reports:—"The character and quality of the operations carried r. with bovine lymph were typical and satisfactory. Fresh bovine lymph acts in a similar manner as good humanized lymph, but

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the operations performed with the former are attended with a greater degree of constitutional and local irritation as manifested by stronger fever and wide and more fully developed areola." In the Eastern Bengal Circle this lymph was found on receipt to be, with a few exceptions, good, containing clear virus with no trace of blood. Still, however, notwithstanding that every precaution was exercised, many tubes failed. From the cases that proved successful the Superintendent is inclined to believe that the virus is not in any way inferior to humanized lymph, as when established it produces as typical vesicles as the The Superintendent of the Behar Vaccination Circle holds to the other virus. same opinion, and adds that very nearly the whole of those who were vaccinated by the second transmission of this virus were successfully operated on. supplies of bovine lymph were sent to the *Orissa* Circle from this office in August and September. With those 54 persons were operated on and the operations were attended with 46 successes. The virus thus established was distributed in tubes throughout the circles, and 92 27 per cent. of the operations performed proved successful. The Superintendent's opinion with regard to this virus is that it is much superior to humanized lymph in respect to raising typical vesicles. In the Rungpur town the trials with this lymph in October failed owing to the heat of the weather; those conducted in November resulted in 104 successes in 108 cases, and after this the virus was transmitted by arm to arm. Dr. Dutt, the Civil Surgeon, states that bovine lymph whon successful gives better vesicles than humanized lymph. Similarly, the earlier supplies failed in the Pubna, Noakhali and Comillah towns and those sent in November succeeded, and the vesicles obtained were satisfactory. The success with bovine lymph in the Chupra, Revilgunge, Sewan, Gopalgunge, Bhori, Hutwa, Rajmehal, Salibgunge, Colgong, Hazaribagh and Purulia towns was great. In many of these places bovine lymph was found sufficient and Debhatta.

Bali. Bhudressur. Boadiabatti. Satkhira. Debhatta.
South Suburban
town.
Bansberia.
Northern Bengal
State Railway.

places bovine lymph was found sufficient and humanized lymph not required. The reports from the towns named in the margin indicate that vaccination was established in them with bovine lymph and that this virus was superior to human-

ized lymph.

125. Dr. Gupta, the Superintendent of Vaccination, Metropolitan Circles, whose experience in the matters is great and Suggestions for the better success of operations with Bovine Lymph. extended, says that the assertion of Assistant Surgeon Ram Chandra Mitra, Deputy Superintendent of Vaccination, Calcutta, that the failure of points with bovine lymph exceeds that with humanized lymph does not accord with the experience of the Deputy Superintendents, past and present, of the Suburbs of Calcutta. He, however, explains that if the failure of points does occur, it might be due to the fact that sometimes serum only is squeezed out by the pressure of the forceps, especially towards the end when all genuine lymph has been extracted. He then submits the following fact in illustration of his opinion that the deterioration or otherwise of lymph stored in tubes is mainly dependent on atmospheric temperature. In December 1882 the first calf was vaccinated in the Animal Vaccination Depôt with lymph in tubes a month or more old, having been brought from On the second or third Bombay by Babu Ram Soonder Ghose, Rai Bahadoor. day after the operation the Babu was dissatisfied with the result, and, anticipating failure, telegraphed to Bombay for a further supply of fresh lymph. But, before this arrived the calf presented genuine vesicles on the fifth and seventh day, and other calves were successfully vaccinated from the virus thus He mentions that he observed in the Central Animal Vaccination obtained. Depôt in London under Dr. Cory that ivory points charged with calf lymph, or what appeared to be coagulated blood, was put into small envelopes and posted to different parts of the country; that the vaccinations with this virus were satisfactorily successful; and that tubes are not used except for despatching the lymph to India and the Colonies. He regrets that the vaccination season in India should commence in September, October, or November, the most sultry and unfavourable months of the year, for he has observed that calf lymph stored in December and January gave more successful results than those stored in the unfavourable months abovementioned. Dr. Gupta made some experiments on the action of corrosive sublimate on bovine lymph in view to prevent its decomposition in tubes, but the results obtained were not decisive, and the trials could not be conducted

to a final issue owing to his having had to leave on deputation to military duty and to the Assistant Surgeon in charge of the Animal Vaccination Depôt having been removed to another appointment when he had just begun to carefully study the subject of storage and better modes of operating. It is proposed to repeat the above and other experiments this year during the recess. Dr. Lyons, the Civil Surgeon of Dumka, finding that bovine lymph failed constantly in the hands of the Civil Hospital Assistant, determined to perform the operations He accordingly, on receipt of the next supply of lymph, vaccinated three children with it in the usual way, that is with the lancet, and was surprised that the operations faired, although the lymph appeared to be good. He then resolved to try vaccination with needles, a process which he had adopted in Eastern Bengal. Accordingly, with another supply of lymph, he vaccinated a European child in February in three places on each arm, using the lymph freely. After the left and one point on the right arm had been operated on, there cccurred some delay in extracting the lymph from the one remaining tube, and the child having become troublesome, further delay occurred, so that the lymph poured on the glass dried up and a little tepid water had to be added to enable him to complete the operation. The results of this trial were as follows: No vesicle appeared on the left arm, nor at the site of first abrasion on the right arm, but on the other two sites into which diluted virus had been inserted three perfectly formed vesicles rose, the lowest having two separate ones on it. Babu's child was next successfully vaccinated from virus taken from this arm, and after this the virus was maintained by the arm to arm process continuously until 54 cases without a single failure had been reached. Dr. Lyons is of opinion that "in this dry climate the lymph hardens so rapidly that, even in the process of applying, it dries to such an extent that it cannot be absorbed, especially in punctures where no doubt the flap of cuticle pushes back the lymph along the lancet." Judging from the lesson that may be learned from the case just related, it would seem that the lymph, though viscid, retains its vitality, but sometimes needs dilution to render it easy of absorption. In using preserved lymph, Mr. Lyons only followed the dictum of M. Warlomont, the founder of the State Vaccine Institute of Belgium, who says that with preserved bovine lymph " scarifications should be used to the exclusion of every other mode of introduction."

126. The marginal table exhibits the total number of vaccinations which

WORK OF THE YEAR.

	Total num	ber of	Vaccina	tions	performed.	
Circle	8.				1886-87.	1885-86.
Calcutta	100	•••	•••	•••	10,563	12,365
Metropolitan					37 (190	373,347
	Calcurta, inclu Vaccination De		peration	ns i''	14,337	14,044
Total of Metr	opolitan Circles		•••		888,727	387,391
Darjiling Circ	:le	•••	•••	•••	290,291	252,562
Ranchi	,,	***	•••		169,385	126,426
Southal Pergu	innaha Circle		•••	•••	143,918	114,539
Eastern Benga	al Circle	•••	•••		387,281	286,032
Orissa Circle	***	•••			66,277	57.681
Behar .,	•••	•••	•••	•••	65,739	47,178
Total of Vacci	nation Circles	•••	•••	•••	1,522,176	1,284,174
Municipalities	, Dispensaries,	&c.		•••	88,101	84,822
	GB	AND T	OTAL	•••	1,610,277	1,368,996

were performed during the year under review in comparison with the outcome of the preceding year. This coming year. parison indicates marked improvement in the work of this year, inasmuch as 241,281 additional operations were performed, and all the Circles, including the Municipal Area, contributed to the excess, excepting Calcutta, where a diminution of 1,802 operations occurred. The percentages

of the enhanced contributions, which illustrate the relative merits of the work of the circles, stand as given in the

Bebar Circle 28·23
Eastern Bengal , 26·14
Ranchi , 25·36
Sonthal Pergunahs , 20·41
Darjiling , 12·99

Orissa Circle ... 12·96
Municipal Area ... 3·72
Suburbs of Calcutta 2·04
Metropolitan Circles ·27

of the circles, stand as given in the margin. It should, however, be mentioned that in the Ranchi Circle 1,945 of the operations were performed in 1885-86, but not having been submitted in time by the opera-

tors, could not be included in the returns of that year, and had consequently to be brought over to the record of this year. The causes of the diminution of operations in *Culcutta* are said to be (1) paucity of unprotected children; (2)

diminution in number of subjects, consisting chiefly of the crews of the Maldive and Arab crafts, to be operated on in the Port of Calcutta; and (3) only 31 vaccinations having been performed in the Presidency Jail against a large number during the preceding year. In the rest of the circles (excluding the Metropolitan) where an increase of operations as above mentioned occurred, the following causes have been put forward as accounting for the increment.

Darjiling Circle.—The general increase is simply traceable to the transfer during this year of the Pubna district with its Inspector and 28 Licensed Vaccinators to this circle, who brought in 41,692 operations. Eliminating this addition there was a diminution in the operations performed in the circle as it stood last year of 3,963, and this is accounted for by the presence of cholera in some of the districts and paucity of subjects for operation, particularly in Bogra and Jalpaiguri. Runchi Circle.—All the improvement in this circle was accomplished by and was due to the activity of the Licensed accomplished by and was due to the activity of the Licensed agency, for there was a diminution in the operations performed by the Government agency. This is traced to want of energy on the part of the vaccinators and to the work having been conducted in an irregular and unmethodical manner. It should be mentioned here that although creditable improvement has been effected in the work of this year by the present Superintendent, a very great drawback to the progress of vaccination in this circle has hitherto been a continuous change of Superintendents. From a calculation made in this office it appears that no less than 14 officers had charge of this circle from 1863 up to the present time. In the Sonthal Pergunnahs Circle the increase in the work of the Government agency was due to the greater number of the villages taken up being new, presenting consequently a large number of unprotected children for vaccination; (2) to the inspection of the work being frequent, the superintendent having visited the villages seven times, explaining to the people the benefit to be derived from vaccination and impressing upon them that they were indebted to the bounty of Government for its advantages without having to pay for them; and (3) to the great assistance rendered to the cause of vaccination by the Monghyr District Superintendent of Police who induced the people to accept it. The increase in the work of the Licensed agency was due chiefly to the more extended supervision exercised by the appointment of three Inspectors for the Bhagulpur and Monghyr districts. There was, however, a large decrease of operations in the Sonthal Pergunnahs district amounting to 12,150. This is attributed to paucity of subjects for vaccination, the district having been traversed by Vaccinators for years in succession. In the Eastern Bengal Circle the whole increase was on the side of the Government agency, and was achieved in the face of a large number of the establishment suffering from fever which was very prevalent, so that two of the men died and nine were totally unfitted for duty and had to resign. The decrease in the work of the Licensed agency was attributed, (1) to work having been commenced late in October owing to the inundations not permitting the Vaccinators to proceed to the localities selected for operations; (2) to severe outbreaks of cholera interfering with the vigorous pushing on of vaccination, and the presence of fever stopping operations altogether; (3) to the transfer of the Pubna district to the Darjiling Circle whereby the area of work was diminished and the number of operations consequently reduced; (4) to paucity of subjects in Noakhali which, although transferred to the Licensed agency had been over-run exhaustively by the Government Agency before; and (5) generally to paucity of subjects in areas which had been traversed before. The general and unprecedented increase in the number of the operations performed in this circle this year is rightly said to be mainly due to the strict supervision exercised by the Superintendent over the work of his subordinates by Behar Circle.—Here the increase was due to frequent inspections thereof. the extension of vaccination to six thanas in Shahabad. In the Orissa Circle the increase was accomplished by the Licensed agency and is traceable to four additional thanas in Cuttack having been taken up by this agency. decrease in work of the Government agency was said to be due to unusually heavy rains in October precluding travelling, and to sickness among the vaccinators.

127. Of the total vaccinations of the year in the Suburbs of Calcutta, 2,787

Vaccination in the Cooly Depôts in the Suburbs of Calcutta.

against 3,574 in the preceding year, were performed on the Coolies in the Emigration depôts prior to deportation. Dr. Gupta rightly observes that in

estimating the value of the work done in the Suburbs this number should be climinated, as it comprises people from different parts of the country and thereby leads to false conclusions 'as' to the degree of protection afforded to the permanent residents.

128. In the town of Calcutta there is a female Vaccinator. She operated on 107 grown up Hindu and Mahomedan females, Female Vaccinator in Calcutta. for which duty she has been entertained. outturn is not large, but as the drawbacks to her fuller utilization have been removed by the amended Compulsory Vaccination Act, it is hoped that her services will be in greater requisition in the Hindu and Mahomedan zenanas, particularly in carrying on re-vaccinations. I may mention here that during the year I was consulted by Government on the subject of female vaccinators, on the motion of Surgeon-General E. Balfour, who believed that vaccination would be advanced by the employment of women in the Vaccination Depart-I replied that I was not in favour of the employment of female vaccinators on the following grounds, viz., that vaccination had already progressed considerably and was freely accepted from the hands of the present agency, not even those who most rigidly adopt the zenana system demanding female vaccinators; that it would retard and complicate the working of the existing establishment if a new element were introduced difficult to control and very hard to move about; and that I was of opinion that in only large towns female vaccinators may be useful, although the experience in the Suburbs of Calcutta, where a female vaccinator had been employed, went to show that she was objected to by the heads of families.

129. Although there was, on the whole, a small increase (3,279) in the number of vaccinations performed in this area, individually considered no less than 92 out of 169—

the total number of Municipalities under vaccination—returned reduced work,

Decreased Vaccinations. Decreased Vaccinations. 2,2·18 714 ... 513 Patna Howrah Roserah Hughli ... 500 City Murshidabad 704 Rungpore 403 ... Chunderkona 623 Baranagore 443 ... Khulna Ramjibunpore 405

conspicuous among them being those named in the margin. Tho reported causes of this retrogression may be summarized as follows: Paucity of subjects for vaccination; ill-health of the children available for vaccination;

unwillingness of parents or guantants have their children vaccinated; their evasions or excuses whereby vaccination was delayed or altogether prevented; want of, or imperfect registration of births; repeated failures of lymph, both bovine and humanized, before it was established; inattention, carelessness, want of energy, incompetency, misconduct, &c, on the part of vaccinators; sickness and absence of vaccinators; charging them with other work besides vaccination, such as registration of births and deaths in some places; absence of small-pox which was epidemic last year and induced large numbers to be vaccinated; late commencement of vaccination; withdrawal of foreign population by which the number available for vaccination was reduced, e.g., coolies in jute mills, brickfields, &c., labourers on Hughli Jubilee Bridge Works; and last, but not least, incomplete supervision by superior officers over the work of their subordinates.

130. Of the total vaccinations of the year, 30,226 were performed during

Work performed during the Recess.

Metropolitan Circles ... 9,112
Suburbs of Calcutta ... 4,885
Darjiling Circle ... 590
Eastern Bengal ,... 5,196
Southal Pergunnahs,, ... 4,896
Ranchi ,, ... 3,425
Behar ,, ... 1,551
Orissa ,, ... 571

the recess, and were undertaken, as usual, for establishing or maintaining lymph for the working season, or for suppressing outbreaks of small-pox. The marginal table shows the distribution of these operations in the several circles. Moreover, in the Metropolitan Circles the Inspectors were employed in taking the vaccine census of many villages; but the result has not yet been declared.

This information is afforded in the marginal table.

Number of Primary and Secondary operations and rates of success achieved under both heads

	P	BIMARY.		SB	CONDA	RY.	INCREASE DECREASE CERSFUL TIONS IN AS COMI	OF BUC- OPERA- 188# 87 'ARED	INCREASE OR DECREASE IN PER CENTAGES OF SUC CESSFUL CAMES IN 1846-77 AS COM PARED WITH 1866-8d.		
Cincles.	Total number of operations in 186-37.	Number of successful operations in 1886-57,	Ratio per cent. of successful cases in 1896-97.	Total number of operations in 1856-87.	Number of success ful operation in 1896-87.	Ratio per cent. of successful cases in 1886-57.	Primary.	Secondary.	Primary.	Secondary.	
Calcutta	9,009	8,810	97.64	894	ſ	1	1,336 <i>D</i>	. 87 D	1.287	1·10D	
Metropolitan Circles Suburbs of Calcutts, including Central	374,304	879,357	90.75	20	17	65:39	1,033 <i>T</i>	3,1 D	·08 <i>D</i>	16:35 <i>I</i>	
Vaccine Depôt and Cooly Depôts	10,114	9,515	93.08	4,223	1,820	52.50	200 D	397	·6] I	7:85 D	
Total of Metropolitan Circle	384,478	882,902	99 71	4,249	1,837	52.30	633 <i>T</i>	51	.00D	4:33 <i>D</i>	
Parjiling Circle Ranchi Southal Pergunnaha	290,218 109,264	288,673 167,727	99:93 99:74	78 121	71 83	91 °02 68°59	8 9,152 <i>I</i> 42,893 <i>I</i>	63 <i>I</i> 8 <i>I</i>	.101	49:93 <i>[</i> 1'93 <i>[</i>	
Circle Eastern Beugal Circle	142,657 387,252	142,264 386,966	99.75 99.94	1,256 29	1,177 27	93·71 93·10	29,059 <i>T</i> 101,824 <i>T</i>	1,178 <i>I</i> 7 <i>I</i>	.127	85:39 <i>1</i> 57:39 <i>1</i>	
Orissa Circle Beliar ,	66,277 65,681	62,256 64,510	93'94 98'07	58	6	10 52	7,470 <i>I</i> 18,064 <i>I</i>	15 D	1:35 D	13°89D	
Total of Vaccination Circles Municipalities, Dis-	1,515,491	1,504,138	99.21	6,685	8,301	57:02	235,9597	1,172/	·03 D	9:24 <i>I</i>	
pensaries, &c GRAND TOTAL	87,036 1,602,527	81,020 1,585,167	94.75	7,760	3,959	59.11	3,951 I 239,910 I	601 D	-24I -02I	1'00 D 5'20 I	

A summary of the facts disclosed by it follows: (1) That in comparison with the figures of the preceding year, thero occurred, on the whole, an increase the \mathbf{number} of successful primary operations performed, amounting to 239,910. (2) That this increment was contribu t e d to by all the Vaccinati o n Circles, exce ptin g Calcutta and its Suburbs,

as well as by the Municipal area. (3) That the areas which furnished the advanced results took rank in point of merit as follows:—Eastern Bengal Circle with 101,824 excess operations, Ranchi Circle with 42,893, Darjiling Circle with 38,152, Sonthal Pergunnahs Circle with 28,059, Behar Circle with 18,064, Orissa Circle with 7,470, the Municipal area with 3,951, and Metropolitan Circles with 1,033. (4) That in re-vaccinations there was, on the whole, an increase of operations in the Vaccination Circles of 1,172 operations against a decrease in the Municipal area of 601, culminating in an increase of 571 areas decrease in the Municipal area of 601, culminating in an increase of 571 operations. (5) That taking the Vaccination Circles individually, excluding Orissa, in which no re-vaccinations were performed, improvement is seen on the side of Sonthal Pergunnahs, Darjiling, Suburbs of Calcutta, Eastern Bengal and Ranchi, and re-trogression on the side of Calcutta, Metropolitan, and Behar in the order named. (6) That with respect to success achieved in primary vaccinations the ratios indicate that all the Circles returned approvable results. Increase or derease in re-vaccinations is greatly dependent on the presence or otherwise of small-pox. The high rates of success in these operations shown in the above table as having been attained in almost all the circles cannot be accepted as correct for reasons submitted in my former Reports.

Average number of Operations performed by each Vaccinator.

CIRCLES.	Averag Ber Vaccin	OF	NUMB OPERA PER		Difference in 1880-87.		
	1886-87.	1885-SG.	1886-87.	1885-86.	Increase.	Decrease	
Calcutta	19	19	556	651		95	
Metropolitan Circles Suburbs of Calcutta	491 14	391 15	763 1,0%4	980 980	88	217	
Total of Metropolitan Circles	505	398	770	978		208	
Darjiing Circle Renchi , Konthal Pergunnahs , Eastern Bengal , Crass , Beluar ,	897 205 269 524 53 J24	190 187 123 869 42 147	731 826 535 739 1,251 530	1,329 676 931 707 1,378 321	150	598 596 59 122	
Total of Vaccination Circles Municipalities, Dispensaries, &c	2,096 248	1,463 226	726 355	878 376	*****	152 20	
GRAND TOTAL	2,844	1,689	687	811		124	

The table in the margin, setting forth this information, indicates clearly want of enery on the part of the Vaccinators in the performance of their work. The large increase this year in the number of vaccinations performed, vide paragraph 126 is apparently mainly due to 655 additional. Operators having been in the field. The marginal figures show that each Vaccinator performed. on the whole, 124

fewer operations than during the preceding year, and depreciation is seen in all the *Vaccination Circles* excepting Behar, Ranchi and the Suburbs of Calcutta, as well as in the *Municipal area*, conspicuously in the Darjiling, Sonthal Pergunnahs and Metropolitan Circles.

133. This information will be gathered from the table in the margin. I

Comparative value of work performed by the Licensed and Government Agencies.

	Number of Operators.	Total number Vaccinated.	Total number of Primary Vaccinations.	Total number of successful Primary Vaccinations.	Total number of successful Infant Vaccinations.	Total number of Children successfully vaccinated.	Total number of successful Adult vaccinations.	Average Operations by each Vaccinator.	Proportion of Population protected per 1,000.
Licensed Agency Government Agency	1,811	1,110,973	1,109,461	1,105,335	175,679	795,556	134,100	618	21:79
	285	411,203	406,080	398,603	33,833	230,723	128,247	1,448	7:89

calls for no comment, for the considerably larger number of primary vaccinations performed by the Licensed Agency as compared with that by the Government Agency was an expected event when the number of the Operators was also considerably larger; but it is evident that the Government Vaccinators exercised

greater care and activity in the performance of their work than the Licensed Vaccinators, when it is seen that each of the former performed 830 more

operations than each of the latter.

134. During the year under review, 832,337 males and 777,940 females were vaccinated, being in the proportion to population according to Sex. Were vaccinated, being in the proportion to population according to Sex of 3.11 and 2.91 per cent. respectively. Compared with the operations of the preceding year, it is seen that in the Vaccination Circles and the Municipal area combined a larger population of both sexes was protected, the increment being represented by 36 per cent. of male population and 37 per cent. of female. But, while the Vaccination Circles, taken as a whole, present a similar feature, considered individually, they exhibit much diversity both with regard to sexes protected and to

	of po	or decrease pulation tected.	Increase o of popu prote	lation
	Males.	Females.	Males.	Females.
Calcutta	·27 D	71 D	Sonthal Pergunteres 58 I	·54 I
Metropolitan	·03 D	·01 I	Eastern Bengal 1.13 I	1·19 I
Suburbs of Calcutta	·58 I	·54 D	O 44 D	·12 D
Darjiling	01 I	·02 [Behar '56 I	\cdot 55 $m{D}$
Ranchi	·69 I	·65 I		

the extent of increased or decreased protection afforded, vide figures in the margin. In the Municipal area the male population was vaccinated at an equal rate in both years, viz.,

at 3.62 per cent. of that population, but the female population was protected to a greater extent, the increment being represented by 18 per cent. of the female population.

135. The returns of the year show that 6,188 Christians, 993,061 Hindus, 588,336 Mahomedans and 22,692 of other races were vacci-

nated. The proportions per cent. which these numbers bear to population of

Christians

Mahomedans

Other races

Hindus

Proportion per cent, to each Class vaccinated.

In the Vaccinated.

In the Vaccinated.

In the Wunicipal Area, Total.

5:15 5:03 5:13

3:04 3:60 3:08

3:06 3:19 3:07

1:27 4:22 1:28

each of the Classes or Nationalities named, are shown in the margin. The figures indicate that the greatest protection was afforded to the Christians and the least to those coming under the head of "other races," while the Hindus and Mahomedans occupied an intermediate position, having been

vaccinated at an almost equal rate. The Circles individually considered show that the Christians were better protected in the Sonthal Pergunnahs, Orissa and Eastern Bengal Circles and in the Suburbs of Calcutta, than in the rest of the circles, the Hindus in the Suburbs of Calcutta and the Ranchi and Eastern Bengal Circles, the Mahomedans in the Orissa Circle and in the Suburbs of Calcutta, and the other races in the Darjiling and Sonthal Pergunnahs Circles.

Vaccination according to Ago, and protection afforded to the number avoid elaboration, and the particulars regarding the number born refer to the seven years 1880-81 to 1886-87.

VACCINATIO		OMDING.	10 1101								THE N							
		GF THE 8 LY VACCII 18 1880-87	MATED	CEN	PORTIO F. TO T RIMAR CINAT: 1886-87	OTAL LLY RD IN		to 1886-87, at	. , , ,				under six years vaccinated from	ve who were a 1880-51 to	r one year) to	CEN NU MARI	T. TO T MBRR LY VA	ACCIN-
CIECLES.	Under one year.	One year and under six years.	Six years and above.	Under one year.	One year and under six years.	Six years and above.	Population.	Estimated births from 1890-81 30 per 1,400 of population.	Total number primarily vacults@c.81 to 1886-87.	Who were successfully vac- cinited from 1880-51 to 186-87.	Who died from 1890-91 to 1856-87.	Who remained unprotected at close of 1896-87,	Children of one year and unwho were successfully vac	Adults from six years and above successfully vaccinated from 1886-87.	Ratio per cent. of infants (under cestimated Births during 1890-81	Of Infants under one year.	Of Children of one year and under six years.	Of Adults from six years and above.
Calcutta	4,176	4,172	492	46'12	46.08	5:43	433,219	90,979	64,001	23,307	17,883	40,789	31,468	5,070	52.01	36.11	49 16	8 80
Metropolitan A amal Vaccination Depot Suburbs of Calcuita	43,887 81 2,077	261,741 7 5,441		73*80	16.60	9.25	251,439		2,498,242 74,350	267,011 · 14,328	251,183 12,354	2,302,364 26,119	1,708,397 40,603	516,027 9,031	9·17 27·13	10 ⁻ 68	69 38 54·61	
Total	46,895	270,191	65,816	12.51	70:35	17:13	14,111,240	2,963,359	2,572,592	281,339	263,537	2,418,483	1,740,000	525,058	9.40	10 03	67.88	20.40
Darjiling Ranchi Sonthal Pergunaths Eastern Bengal Behar	62,235 42,268 15,987 28,743 3,01 6,105	208,656 118,223 119,297 206,601 51,786 50,403	7,28 6,980	21.54 25 13 11.21 7.42 4.54 9.47		4·30	5,334,716 10,549,789 2,541,396	2,117,395 916,454 11,202,287 2,215,458 593,694 707,672		366,862 237,621 84,375 185,612 18,847 21,681	120,552 78,726 91,775 101,781 83,042 190,629	1,620,981 600,107 942,187 1,838,065 431,805 495,362	1,813,570 635,050 601,280 1,294,277 248,871 202,979	264,095 68,781 111,048 702,393 72,346 24,332	17:32 25:92 7:71 8:37 8:53 3:06	18:69 23:46 10:78 8:25 5:34 8:05	66:91 63:76 74:94 57:59 70:58 80: 3	8 76
Total of Vaccin- ation Circles	209,512	1,032,27+	262,347	18.86	68.20	17:85	50,787,125	10,665,298	9,267,175	1,221,644	1,037,925	8,405,729	6,077,4:0	1,853,729	11'45	13:18	63:57	20.0

The results disclosed by the above table are disappointing. It shows that during the seven years under notice, of the estimated births amounting to 10,665,298, only 1,221,644, or at the rate of 1145 per cent. underwent vaccination, thus indicating that over 88 per cent. remained in the Province in an unprotected condition, and liable to be attacked by small-pox The Circles relatively considered show that, while Calcutta and its Suburbs and the Ranchi Circle have done best in this direction, there exist serious defects in all the Circles. Calculated on the total number primarily vaccinated, infant vaccinations exhibit very little better results, the same circles as above mentioned also taking the lead. Of the two remaining classes of vaccination under this head, viz., of children and adults, the former appear to have been fairly well vaccinated, and the latter to approach the mark which, under existing circumstances, may be expected. The chief reason why infants cannot be overtaken by vaccination is no doubt the strong and universal objection on the part of their parents or guardians to permit them to be operated on when of tender age, fearing evil consequences. It must not be forgotton, however, that these birth statements refer to the whole Province, and that up to this time vaccination has not been extended to five districts in Behar and one in Bengal. Till establishment is provided for them, the protection of the Province as a whole will remain very incomplete. The general features presented by the figures of the year under review bear a close analogy to what has been said above, and need not therefore be dwelt upon separately.

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In presenting in the margin the statement affording this information, Degree of supervisoin exercised by the Inspecting Officers over the work of the Vaccinators. Work of Sanitary Commissioner.

and Manager Sciences 15 and 15	İ٨	IM DER SPECTI PFICE	NG		BER OF	O BY-	CENT. FUL	ORTION OF SUC CASES VED B	OB-	PROPOSTION PRE CENT. OF INSPEC- TION TO TOTAL NUMBER VACCINA- TED.			
Circles.	Superintendents.	Deputy Superin- tendents.	Superintending Vaccinators.	Superintendents.	Deputy Superin- tendents.	Superintending Vaccinators.	Superintendents.	Deputy Superin- tendents.	Superintending Vaccinators.	Superintendents.	Deputy Superin dents.	Superintending Vaccinators.	
Calcutta Suburbs of Calcutta Metropolitan Circle Darjiting , Ranchi Sonthal Pergunnahs Circle Eastern Bengal , Behar , Total	} 1 1 1 1 1 1 1 1 1 1 1 6	{	1 2 89 13 15 17 5 6 10	586 424 780 777 312 1,721 432	858 	arca. 10,063 6,135 4,769 4,360 2,940 1,578 2,577	94'10 96'90 19'75 90'49 90'56 05'04		99°75 94 42 95°53 99°43 90°04 97°45 96°05	8-90 6:40 4:82 12:40 14:86 6 07 79:19 12:42	49:50 16:64 28:83 8:62 9:23 2:30 	63·15 67·99 56·70 57·63 70·79	

beg to preface it with the obser vations that, I had had during personal vear interviews with Superintendents of Vaccination, when I enquired into the manner in which inspections of vaccinations were being carried by them and their subordinates, and

corrected any departures from my original instructions on the subject as to the plan on which the work should be carried on, vide paragraph 117; that in some places I personally examined the quality and sufficiency of the vaccinations being performed; and that I carefully examined the monthly diaries-192 in number—in which the inspection work performed by the Superintendents, the Deputy Superintendents and the Inspectors of Vaccination were regularly reported, and corrected every irregularity which was detected to have been committed, by calling upon them for explanations with regard to lapses in their tours, to not proceeding to the interior of their respective charges, but confining their inspections to the neighbourhood of their head-quarters; to passing over, without inspection, areas which lie between other areas inspected; to insufficient inspections; to insufficiency and bad quality of the vaccinationperformed; to inadequate control over the subordinate agency; to non-veris fication of births and deaths; and to the other shortcomings. I should mention that this procedure entaited much correspondence, for the explanations submitted had to be carefully sifted.

From the table above marginally furnished, it will be seen that there 138.

Work of Superintendents, Deputy Superintendents and Subordinate Inspecting staff.

	THENU	BORDECR ABER OF V ISLIED BY	ILLAGES	DRC: PROI CENT. O	CREASE REASE 12 PORTION: F INSPEC NUMBER NATED.	TATE S PER FIONS TO E VACCI-
Circles.	Superintendents.	Deputy Super- intendents.	Subordinate Ins- pecting staff.	Superintendents.	Depury Super- intendents.	Subordinate Inspecting staff.
Calcutta Suburbs of Calcutta Metropolitan Burvilong Ranch Southal Pergunnahs Eastern Bengal Octor Beild Beil	151 7 7 168 166 1 245 474	7 223 7 162 2	7 6,189 D D 1,981 J J 1,268 J 162 J	1.08 T	8.14 D	3.17 D

was on the whole much improvement in the inspection work of all three class of Officers indicated therein, excepting in one case, in comparison with the work of the preceding year, for the Superintendents appear to have visited 847 additional villages, the Deputy Superintendents and the subordinate Inspecting staff 194—and that the percentage of the total number of vaccinations examined

by the first-named Officers was in excess by 1.55 and by the last-named by 3.69. The exception was the Deputy Superintendents who, although they visited a larger number of villages, fell short in the vaccinations tested by 2.87 per cent. of the total operations seen by them. Examining the figures appertaining to each Circle, the inspection work performed by these three classes of Officers stands, in point of merit or demerit, as noted in the margin. In reviewing these figures attention is attracted to the facts that, the great majority of the Superintendents returned higher percentages of vaccinations tested, that the same was done by the subordinate Inspecting staff of all the circles excepting Sonthal Pergunnahs, and that the general falling off in the same work by the Deputy Superintendents, above alluded to, was contributed to

by the Deputy Superintendents of all the circles.

Various causes have been put forward to account for the shortcomings where they exist. I consider them to be, with some exceptions, more or less satisfactory; but to reproduce them here would simply expand my Report, which, for certain important reasons, has already exceeded due limits. The exceptions follow: Superintendents.—The inspection work, considered as a whole, of Dr. Wood, of the Darjiling Circle, was not satisfactory. Assistant Surgeon Kali Prosonno Ghosal of the Sonthal Pergunnahs Circle, who was in charge thereof for the greater portion of the working season, is seen to have returned less work for no reason that has been furnished. Assistant Surgeon Mothura Nath Sen of the Behar Circle, whose work has been unfavourably commented on before, appears to have made no improvement this year, but, on the contrary, his inspections of vaccinations performed were most conspicuous for deficiency, the percentage of such inspections being lower than that of the preceding year by so much as 8.96. Deputy Superintendents.—Metropolitan Circles.—Dr. Gupta decms the work of Assistant Surgeon Jadub Chandra Ghose, Deputy Superintendent, 2nd Metropolitan Circle, to be satisfactory, considering that he officiated as Superintendent during October and almost the whole of November. It is clear, however, that the rules on the subject of inspections, particularly that portion thereof relating to the testing of vaccination in each area in which it was being carried on in succession, were not attended to by all the Deputy Superintendents, for the Deputy Superintendent of Vaccination, 1st Circle, Umcsh Chandra Ghose, had omitted to visit two thanas in Jessore and three in Khulna; the Deputy Superintendent, 2nd Circle, Preumber Mitra, four thanas in Nuddea, and one each in Birbhum and Murshidabad; that of the 3rd Circle, Jadub Chandra Ghose, one thana each in Hughli, Howrah and 24-Pergunnahs, and three in Burdwan; and that of the 4th Circle, Ashootosh Law, 12 thanas in Midnapore and two in Bankura. Some untenable reasons were submitted for the Assistant Surgeon Durgadas Rai, of the Eastern Bengal Circle, fell off considerably in his inspection work. His explanation is that the inundations precluded his proceeding on tour as early as was desirable, and that much of his time was occupied in starting and introducing vaccination in the Noakhali district. Inspectors and other Officers of the same rank.—The Officers of this class whose inspection work was prominently condemned as bad, insufficient, and careless were:—Hidayatullah, M. M. Sen, and Abdool Hamid of the Darjiling Circle; Alumuddin, Mohamed Ali, and Luchmun Salii of the Ranchi Circle; Hari Charan Bancrjee and Haradhone Sen of the Sonthal Pergunnahs Circle; Mahamed Idris, Tamizzuddin, Annunda Chandra Das, and Baikant of the Eastern Bengal Circle, and Kanti Chandra Acharji of the Behar Circle.

On the other hand, it would not be fair not to bring to prominent notice those Officers who have performed creditable work. They are - Superintendents:-Dr. Gupta of the Metropolitan Circles deserves special commendation, for although he returned from military deputation duty late in November, when working season had somewhat advanced, he visited an appreciably large number of villages and tested a fair percentage of vaccinations. ant Surgeon Kassinath Ghose of the Ranchi Circle performed creditable inspection work, and has managed to reform, to some extent, the hitherto conspicuously unruly establishment attached to his Circle, which is evident from the considerably reduced number of cases of misconduct which cropped up during the year. Assistant Surgeon Narendro Nath Gupta of the Eastern Bengal Circle performed commendable work in the face of many difficulties encountered in travelling, and he appears to have reduced the establishment which had been disorganized during the former Superintendent's incumbency to system and order. Assistant Apothicary P. Veeriah Naidu is also to be commended for very good work. Inspectors and other Officers holding the same rank.—
The Officers of this class who were reported to have performed their inspection work zealously, energetically, and satisfactorily were: Jowahri Lal, Shunker Lal, Mohamed Ali Khan, Chuter Bhuj Lal, and Basudhon of the Banchi Circle; Ram Chandra Mullick, Mohim Chandra Bhumick, and Abdul Bari of the Eastern Bengal Circle; Basarakulla and Girja Prashad Doobay of the Behar Circle.

139. In this area the work of the vaccinators is in very rare cases closely work in the Municipal Area.

inspected. Some verification there is, but it is performed generally spasmodically and loosely, and the instances are not rare in which this work is most perfunctorily performed. The general plea is want of time preventing the Medical Officers from according their full attention to this subject. In this connection the Civil Sargeon of Darjiling recommends that the Superintendent of Vaccination, Darjiling Circle, whose head-quarters are at Darjiling for a considerable portion of the year, should look after the municipal vaccination from time to time. This I did voluntarily when I was Superintendent of Vaccination, but the orders placing the vaccination of Sudder towns under the Civil Surgeons, and that of outlying towns under Superintendents of Vaccination, may not permit of this.

140. The expenditure which was incurred for conducting vaccination during Expenditure incurred for Vaccination and the Average Cost of each successful Operation. the year under

AVERAGE COST OF BACH SUCCESSFUL CASE, 1886-87. TOTAL COST IN 1886-87. CIRCLES. Government Govern-Lucen. Licensed Agency. Total. Total. Rs. A. P. Rs. A. P. Rs.a.p. Rs.A.P. Rs. A. P. Rs. A. P. 8,534 9 0 8.534 D 0.Z 0 15 8 0 15 8 Calcutta Metropolitan Circles ... Bovine Vaccination Depôt in the Suburbs.
Suburbs of Calcutta 36.697 2 8 0 1 7 0 1 7 36,607 2 8D 3,107 6 11D 3,397 6 11 {0 11 0 0 11 0 4,624 14 7 1,684 14 7D 7,822 5 6 86,697 2 8 44,519 8 2 0 11 0 0 3 0 1 10 Total of Metropolitan Circles 25,893 5 87 13,813 13 10 7 12,375 0 0 7 19,055 2 67 7,073 8 9 7 10,809 7 8 7 24,684 13 5*P*3,847 12 8 *I*1,796 14 1 *I*4,901 13 6 *I*552 12 7 *I*1,552 5 7 *I* 1,208 8 3*I*9,906 1 2*D*10,578 1 11*D*14,093 5 0*D*6,520 7 :31
9,257 1 5 *D* Darliling Circle Oriesa Bohar 67,980 7 h 74,093 10 6 1,42,074 2 2 0 2 8 0 1 0 0 1 Total of Vaccination Circles ... 12,010 3 6I 0 2 Municipalities, &c. ... ••••• 74,093 10 G 1,54,084 5 8 GRAND TOTAL 07,080 7 8 0 2 8 0 1 0 0 1

the year under review, and the average of each successful operation are exhibited in the marginal table. From the figures it will be seen that the total cost amounted to Rs. 1,54,084-5-8and that of this sum Rs. 1,42,074-2-2 were borne by Government, divided Rs. 67,980-7-8

for maintaining the Government Agency, and Rs. 74,093 10-6 for supervising the Licensed Agency, and Rs. 12,010-3-6 by the Municipalities. Compared with the expenditure of the preceding year, the cost falling to the share of Government was less by Rs. 13,483-5-4, but that borne by the Municipalities was more by Rs. 856-2-3. Placing, however, the increment against the decrement, then we a diminution in the net cost of Rs. 12,627-3-1. All the circles contributed to the reduced cost, excepting Eastern Bengal, where, on the whole, an additional expenditure of only Rs. 107-6 was incurred. The average cost for each successful operation amounted to two annas eight pie for the Government Agency work, one anna for the Licensed Agency work, and two annas four pie for Municipal operations. In comparison with the results of the preceding year there was a reduction in the cost per case in the two first-named groups of areas of one anna and 11 pie and three pie, respectively, against an increase of one pie in the last named, culminating, however, in a diminution for all three groups of five pie.

141. Under this head the reports show that in all Rs. 710-2 were contributions to cost of Vaccination from private sources.

Contributions to cost of Vaccination nations, distributed as follows: Rs. 281 were paid from the Cantonment Funds of Barrackpur, Cuttack, and Dinapur; Rs. 12 by the Zemindar of Chagdighi; Rs. 60 for the Durbhanga Dispensary and Rs. 57-11-6 for the Naraya Dispensary by the Rajah of Durbhanga; Rs. 200 for the Dispensaries of Hatwa, Gopalgunge and Bhori by the Rajah of Hatwa; Rs. 17-15-10, 22-15-11, and 27-8-0, for the dispensaries of Jehanabad, Sursund and Tajpur, respectively, from the Dispensary Funds, and Rs. 30-14-9 by the Northern Bengal State Railway.

142. In Calcutta the increase in the average cost of each vaccination was

Explanations accounting for the due to the gross expenditure having been spread over a diminished number of operations. In the of Operations.

Darjiling Circle the increase in the gross cost of

the Government agency is traced to a part of the travelling allowances in curred in 1885-86 having been drawn in 1886-87. Eastern Bengal Circle.—The increase in gross cost for Licensed vaccinations was due to the entertainment of two Inspectors for Tipperah and Noakhali, and to the salary, with an additional allowance of Rs. 25 per mensem, of the Deputy Superintendent having been debited to the Licensed agency establishment, while in the previous year it was a charge on the Government agency. The same causes and the decrease in the number of vaccinations account for the increase in gross cost of the Licensed agency was due to the work having commenced in September instead of in October, involving thereby the payment of the working salaries for an additional month, and to five more paid apprentices having been engaged, on the authorized allowance, than last year. Behar Circle.—The increase in the gross cost for Licensed vaccinations was due to two additional inspectors having been employed in Shahabad owing to extenison of the licensed scheme to certain thanas in that district. No explanation has been furnished as to the cause of the increase in the gross cost of the Licensed agency in the Ranchi and Sonthal Pergunnals Circles.

143. During the year under review the Licensed Vaccination system was introduced into the Salipur, Kendrapara, Patamundi, and Aul thanas in the Cuttack district in the Orissa Circle; into the Arrah, Belowti, Dumraon, Buxar, Dhangaon and Peroo thanas in Shahabad in the Behar Circle; into the Tegra, Gogri, Sheikpurah, Jamui and Chakye thanas in Monghyr in the Sonthal Pergunnahs Circle; and into the Noakhali district and into thanas Bhola and Barhanudi in Backergunge in the Eastern Bengal Circle. It also appears from the reports that 36 Licensed Vaccinators were

			1	lumber.	1		2	fumber.	allowed to practice in
Culna		•••		1	Muktagachi	•••	•••	1	the towns marginally
Jehanahad	•••	•••	••	1	Kishoregunge		•••	, 1	named, and some Muni-
Faridpo: e		•••	•••	1	Brahmanberia	•••	•••	3	cipal Officers advocate
Madaripur		•••	• • •	1	Behar	•••	•••	2	
Goalundo		•••	•••	1	Nowada	•••	•••	5	the introduction of this
Jhalukati	•••	•••	•••	1	Jamui	•••	•••	ī	agency into their towns.
Perozepur	•••	•••	***	1	Dumka	•••	***	1	
Bajitpur			•••	1	Rajmehal	•••	. •••	1	This recommendation
Sherpur in	Myme	nsing	•••	1	Cuttack (ex-ino	culator	:B)	12	cannot be adopted as
•, •					mith the te		۰ŧ	tho	Compulsomy Vaccination

it is not in accordance with the terms of the Compulsory Vaccination Act.

- 144. Inoculators and Apprentices were trained in Vaccination in the followTraining of Apprentices and others ing Circles. In the Sonthal Pergunnahs Circles 65
 as Licensed Vaccinators. inoculators of Monghyr, 14 of Bhagulpur and 3
 of Sonthal Pergunnahs, and 4 local men were trained, and all these men,
 excepting two of the Inoculators, passed the required examination. In the
 Eastern Bengal Circle 24 men were trained of whom 18 were inoculators. In the
 Behar Circle 13 inoculators were trained. In the Orissa Circle 23 Inoculators
 were trained, 17 on the sanctioned allowance of Rs. 4 each per mensem,
 and the remainder without any allowance.
- 145. Each Licensed Vaccinator in the Metropolitan Circle has been made to deposit Rs. 10 as security for good conduct, in a Post Office Savings Bank and to lodge his pass-book in the Superintendent's Office. But Dr. Gupta suggests that to check misconduct and malpractices on the part of these Vaccinators effectually, the deposit money should be made to reach Rs. 100 by annual additions of Rs. 10. A similar scheme was introduced into the Eastern Bengal Circle, and it is said that it works satisfactorily, as the men have become more careful in the performance of their duties.
- 146. The Superintendent of Vaccination, Eastern Bengal Circle, reports

 Unauthorized Practitioners. that unlicensed men practise largely in his circle, thus interfering seriously with the Licensed Vaccinators obtaining their kivelihood. These unauthorized operators consist generally of Government or Licensed Vaccinators who have been dismissed for misconduct. They give out that they are Government men, and thus impose on the credulity of the people. Legislative interference is indicated.

147. Much difficulty was experienced by the Licensed Vaccinators in realizing their fees in the Darjiling, Eastern Bengal, Behar and Orissa Circles, in parts of the Metropolitan Circles and in the Faridpur Municipality. In Behar two men of Bankipur had to give up practising for this reason, and the same was the case with the Faridpur vaccinator. In Orissa, were it not for the help given by the Civil Authorities and other Police, a large portion of the fees would never have been realized; but in some places the Police declined to render this assistance, and here the Vaccinators had to forego their fees. Some Superintendents and Deputy Superintendents took a great deal of trouble regarding this matter.

148. It was reported that in the plains portion of the Darjiling
Unauthorized Fees levied.

Circle Licensed Vaccinators are believed to take
more fees than that authorized by the rules. To
check this imposition the Deputy Superintendent of the Circle suggests that the
Punchayets be directed to collect the fees for the Vaccinators and to pay them,
taking their receipts, as they do with respect to the salaries of the chowkidars.
This procedure would also meet the general complaint of non-payment of fees.

149. On reports made, Government prohibited Rajahs and Zemindars in Exaction of Fees from Licensed the Ranchi Circle exacting from Vaccinators one-Vaccinators.

The statement of Fees from Licensed the Ranchi Circle exacting from Vaccinators one-Vaccinators.

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a minor Political Chief of Seraikela, levied the exaction.

150. On my representation that the rules for licensing Vaccinators, sancRevised Rules for Licensed Vacci. tioned in Bengal Government letters Nos. 3317T and
2155T, dated, respectively, 14th October 1875 and
1st September 1876, had become obsolete in some respects, and did not accord
with the present administration of vaccination in the Province, the Government, in orders No. 2288T--M, dated the 23rd October 1886, sanctioned the
following revised Rules submitted by me for approval. These Rules have been
circulated all over the Vaccination Circles in English, and in the vernacular
according to the requirements of each.

Rules for Licensing Vaccinators.—1. No person shall be recognized as an authorised vaccinator who is not in possession of a license signed by a Deputy Sanitary Commissioner and Superintendent of Vaccination, and

countersigned by the Magistrate.

2. No person shall be furnished with a license to practise vaccination who has not undergone systematic training for three months. Such training must be obtained from a Deputy Santary Commissioner and Superintendent of Vaccination; and before granting such license, the Deputy Sanitary Commissioner and Superintendent of Vaccination is expected to satisfy himself that the candidate understands all about vaccination, and is practically acquainted with all that appertains to the art of vaccinating.

3. A license may be granted, in special cases, to any person found competent after oral and practical examination by a Deputy Sanitary Commissioner

and Superintendent of Vaccination.

4. Licensed vaccinators should, if possible, be men of good caste and character, not too old, and able to read and write.

5. The grant of a license entails on its possessor the following duties:—

(a) Submitting to supervision.

(b) Restricting his operations to a certain (assigned) area.

- (c) Submitting returns of his work to a Deputy Sanitary Commissioner and Superintendent of Vaccination.
- (d) Proceeding to stamp out small-pox when required to do so.
- 6. It confers the following privileges:—
 - (a) Permission to work within a certain (assigned) area under license.
 - (b) Permission to charge for such work at the rate of two annas for each successful case.
 - (c) Participation in the rewards granted by Government for successful work.

Every licensed vaccinator will be assigned a definite area of country, which he is expected to maintain fully vaccinated. In allotting such area, the following points should be taken into consideration:—

(a) The man's own desire.(b) Whether he is known to, and likely to be favourably received by, the people.

(c) His ability to maintain the area thoroughly vaccinated.

A licensed vaccinator is liable to be deprived of his license:—

(a) When his work is insufficient or bad.

(b) When he refuses to submit his work to supervision.

(c) When he refuses or omits to submit returns.

(d) When he gets too old or otherwise incapacitated for work. (e) When he overcharges or otherwise misconducts himself.

When a man is deprived of his liceuse, another licensed vaccinator should be appointed to his district.

Licensed vaccinators shall be furnished with instruments, stationery,

and blank forms free of cost.

11. When called on to "stamp out" outbreaks of small-pox beyond the limits of their areas, licensed vaccinators will be entitled to a deputation allowance not exceeding four annas a day.

12. Inspectors of licensed vaccinators shall be appointed in every

district where licensed vaccinators are employed.

- The duties of Inspectors are as follows:—
 - (a) To assist vaccinators in establishing and maintaining a good vesicle.

(b) To see that they work exhaustively and properly.

(c) To check their registers and returns by comparison with the cases.

(d) To direct operations undertaken for the purpose of stamping out

small-pox.

- (e) To receive or prepare, check, tabulate and forward to their superior officers the monthly and other returns required from Licensed vaccinators.
- (f) To submit such reports on the work of their districts as may be required from thom.

Inspectors of Licensed vaccinators shall be under the orders of the Deputy Sanitary Commissioner and Superintendent of Vaccination.

15. Arm-to-arm vaccination shall be practised as a means of transmitting

lymph in preference to all other methods.

16. The duty of training inoculators as vaccinators will rest with Deputy Sanitary Commissioners and Superintendents of Vaccination. Whenever possible, ex-inoculators will be attached to Vaccination Circles as apprentices, to whom such allowances will be made as may be sanctioned by Government from time to time, in preference to men seeking permanent Government employment. If at the end of the working season these men are found incapable of efficiently carrying on vaccination, they will be discharged, and not again employed.

151. During the year under notice, the most Chief Opponents to Vaccination.

Chief Opponents to Vaccination.

prominent opposers of vaccination were:

In the Daryling Circle.—The Zemindar of village Jagdah in thana Ranisunkoil in Dinajpur, and the Brahmins and Ferazis of the plains portion of the circle. In the Banchi Circle, the Brahmins, Rajputs, Marwaris, and Boniahs in Hazaribagh and Lohardugga, the Mahomedans and up-country Brahmins in Manbhum, and the Kols in Singbhum. In the Sonthal Pergunnahs Circle, the Marwaris, Goedars, Moghyas, Rajputs, and Ghatwals of Deoghur and Jamtara, the Kherwas among the Sonthals in the Sonthal Pergunnahs and Bhagulpore districts and in the Jamui Sub-division of Monghyr, Raja Chunder Sikhur Mookerjee of village Moolata, than Dumka, and Baboo Moltesh Chunder Bhattacharji of village Searkotary, than Jamtara. The people in these villages cannot be persuaded to submit to vaccination, until the Raja and the Baboo who are leaders accept it. They were reported to the Sub-divisional the Baboo, who are leaders, accept it. They were reported to the Sub-divisional Officers. In the Eastern Bengal Circle, Baboo Barada Kanta Roy, Zemindar of

Kalshakati in thana Backergunge. He threatened the vaccinators that if they per formed vaccination in his zemindari, they would be killed, and directed his men not to afford them lodging. Some of his men assaulted the vaccinators, and six prosecutions for assault had to be instituted. Baboo Umesh Chunder Ghose, Sub-Inspector of Police in thana Surupkati, took steps to discourage vaccination. Also village Mahomedans—Ferazis—in Faridpore. The Magistrate and District Superintendent of Police of Backergunge, to whom I am very grateful, did their best to overcome objections, and among the means employed was an important one which to some extent quieted conscientious scruples, viz., securing Futwas announcing the lawfulness of the measure from several influential Moulvis of the district. In the Behar Circle, the Babhans and Rajputs, all the police officers, excepting the head-constable of the Chunari outpost, and the zemindars and punchayets generally. Some of the vaccinators were assaulted in the sub-divisions of Bhabuah and Sasseram. In the Orissa Circle.—The villagers in village Tanghy in the Cuttack thana, some of whom assaulted two vaccinators and forcibly took away their tubes of lymph and The case was reported to the Magistrate, and the delinquents broke them. This step had a beneficial effect, for soon after, the resistance in this and the adjoining than was less. Municipal area.—The people in the Sarsund town in Mozufferpore raised such a clamour against vaccination that operations had to be stopped under the orders of the Sub-divisional Officer from the 14th The introduction of the Compulsory Vaccination Act is strongly indicated here as well as in the other towns. In Hazipur, Lalgunge and Sitamarkiin the same district—much opposition to vaccination was exhibited. The Civil Surgeon of Puri is of opinion that no amount of persuation (which he has tried without success) will induce the people in the Puri town, including the intelligent and educated classes, to accept vaccination, and that the only remedy is the Compulsory Vaccination Act. In the Balasore town vaccination is said to be received in a half-hearted manner. 'I he people have to be begged, coaxed and humoured for the purpose. In the *Old Muldah* town, Huri Guri of Balia, in Nababgunge, assaulted the vaccinator who went to his house to vaccinate his children with the consent of his wife. Legal proceedings were instituted against him, and the case was pending. In the towns generally opposition is prominently offered by Marwaris, Ferazis, low and high class Mahomedans, the Koyas, upcountry Hindustanis, Rajputs, Kajis, Beniahs, Hulwais, high caste and orthodox Hindus. With regard to the objection of Hindus to be operated on by Mahomedan vaccinators in some places, it should be mentioned, for general information, that it appears that there can be no religious restrictions in connection with it, for in the Bhagulpore Municipalty a similar objection having been raised, Baboo Hurry Mohun Thacoor, a very high caste Brahmin, allowed his family and dependents to be vaccinated by a Mahomedan.

It is very gratifying to record that much of the usual opposition active or passive, reported from year to year with its Present Attitude towards Vaccination in the Vaccination Circles. causes, have been overcome and is dying away in rural circles, under the persistency of the Vaccination Department in pointing out the benefits of vaccination and the evils of inoculation, by arguments, persuasion, &c. In the Metropolitan Circles the Ferazis in Murshidabad, Birbhum, Jessore and Khulna, who hitherto strenuously opposed the measure, are giving in, and the Ecchha families have come round. Mr. Oldham, the Magistrate of Burdwan, in the same circle, reports that so far from there being any opposition to vaccination, the people every where in the district appeared to be most eager for it, and Mr. Tayler, the Magistrate of Bankura, says that all opposition to vaccination has died out in the district, and it is now freely accepted. In the Darjiling Circle the measure is favourably received by all classes in the hill portion, and this statement is supplemented by the Deputy Commissioner's report that vaccination is fairly popular throughout the Darjiling district. In the Ranchi Circle the Kols and Mahomedans of Hazaribugh and The people in Manbhum and Singbhum Lohardugga appreciate vaccination. are being reconciled to the measure, and comparatively less difficulty in carrying out operations this year was felt in the latter district, no religious grounds being now advanced as drawbacks. No difficulty is experienced in the Political Estates, except that the taking of lymph from the arms of children is strongly objected to; and the aboriginies and low caste Hindus, generally,

The report from the Sonthal Pergunnahs Circle is that generally seldom resist. vaccination was received with less reluctance than during the preceding year; that the great difficulty experienced in Monghyr was overcome this year; that the Marwaris, Goedars, Moghyas, Babhans, Rajputs, Ghatwals and the Kherwas above referred to as still objecting to vaccination, did so in a lesser degree, and that the other castes, both Hindu and Mahomedan, appreciate vaccination. In the Eastern Bengal Circle the strong prejudices against vaccination hitherto manifested have to a great extent been overcome, so much so that "vast numbers of Ferazis" of Backergunge, the most persevering opponents on religious grounds, accepted vaccination. It is said that this sect, who formerly objected to vaccination, because their religion prohibited it, now say that their religious books direct that vaccination may be taken when it is performed by cow lymph, but not if human "pip," or lymph, is used. Moreover, the Assistant Surgeon of Backergunge states that in the beginning of the year several applications were received from the interior of his district, asking for vaccinators. In the Behar Circle it was noted that there was an improvement in the attitude of the Bhabans and Rajpoots, the staunchest opposers; that opposition was less when the old inoculators known to the people were engaged to vaccinate them; and that the poorer classes only object because they have to pay fees. The Superintendent of the Orissa Circle reports that, although the adverse feeling towards vaccination yet exists, it has been overcome to some extent; that in many places in the areas where vaccination has spread, people offered their children for vaccination, specially where small-pox had broken out; and that, as a rule, vaccination is appreciated by the Native Christians, Mahomedans and low caste Hindus. It is, however, stated that it is well nigh impossible to break down the barriers of custom handed down to the people from their forefathers.

Attitude towards Vaccination in the Municipal area.

Tumluk. Ram jibanpore. Khirpoy. Hughli. Serampore. Utterpara. Kotrung, Jalpaiguri. Barrh. Bchar. Mozufferpore. Monghyr. Jamalpore. Dumka English Bazar. Purulia.

South Suburban (excepting few Ferazis).
Joynuggur. Bariepore. Balli. Bhuddressur. Culna. Nobodowipa. Debhatta. Kotchandpore. Sherpore in Bogra. Brabmenberia. Rajmelml. Colgong. Khanacool. Jungipore. Kandi.

In this area the objections to vaccination have, to a very great extent, been overcome by the stricter enforcement of the Compulsory Vaccination Act. The report indicate that in the towns named in the margin, no objection whatever was made to vaccination, and that instances were not wanting in many of them in which the people exhibited an eagerness for the prophylactic, applied for it, and preferred it to other protective measures. In Calcutta vaccination is readily received, as is evidenced by the large percentages of home and station vaccinations—28.77 and 69.07 to total vaccinations respectively.

It is only the up-country people, who, as usual, resist the measure, and although the higher classes of this community still resort to various devices to evade it, it is gratifying to find that the lower classes are gradually yielding to the pressure of the law on the subject. In City Murshidabad signs of increasing appreciation of the value of vaccination were exhibited; the prejudices of a few bigotted Mahomedans are fast subsiding; and the example shown by the most res-pectable and influential class of Mahomedans in accepting vaccination induced others to follow it. A marked change for the better was observed this year among all classes in the Jajpore town, and the major portion of the people in the town of Cuttack have recognised the benefits of vaccination. In several towns the resident population are all quite reconciled to vaccination and seek for it, but outsiders, who come in for trade or other purposes, bring with them the prejudices of their native country. people are slow and apathetic and unwilling to vaccinate their children before they are one year old; but in other respects no objection is manifested. In some towns again, although the people generally understand the benefits of vaccination and its superiority to inoculation, there is much indifference to the measure which precludes them from voluntarily seeking for it. If brought to them they accept it without objection.

It is a pleasing duty to record the following prominent instances of assistance accorded to the cause of vaccination Aid rendered in promoting Vaccinby officials and non-officials and by private gentle-

men and zemindars.

f;

In the Metropolitan Circles material assistance was rendered by Mr. Fiddian, the Magistrate, and Colonel Hume, the District Superintendent of Police of Birbhum; by Mr. Anderson, Magistrate of Murshidabad; by Mr. Cornish, Magistrate of Midnapore; by Mr. Coxhead, Magistrate of Burdwan; by Mr. Tayler, Magistrate of Bankura; and by Mr. Clay, Magistrate of Khulna; by the Joint Magistrate of Ranigunge, Babu Uma Churn Gangooly; by Deputy Magistrates Babus Norendra Nath Chowdhuri of Bagirhat, Nundo Proshad Sen of Narail, Komud Nath Mookerjee of Ghattal, Bijoy Madhub Mookerjee of Jungipore, Pran Kissen Das of Lallbagh, and Moulvie Abdul Kadir of Contai; by the Inspector of Police, Babu Gouri Proshad of Bankura, and by saveral Sulphyspoctors and Head Constables. Of the Reighs of Matierah and by several Sub-Inspectors and Head-Constables. Of the Rajahs of Matiarah. who are generally opposed to vaccination, the following members rendered assistance, viz: Baboos Gopal Chundra Mundle and Prannath Mundle. Aid was also given by the Moonshi Zemindar of Taki, in thana Hosseinabad; by Fakeer or Gazee Saheb of Harwa; by the Agent of the late Prannath Roy Chowdhuri of Harwa, and by the Zemindar of Patanda in Panskurah. In the Ranchi Circle by the Deputy Commissioners of Hazaribagh, Lohardugga, Singbhum and Manbhum; by the Sub-divisional officers of Palamow and Giridi; by the Munsiff of Lohardugga; by Police officers generally; by the zemindars of Chittrarpur in thana Ramgurh, and of Sreenuggar in thana Cheinpur. The Deputy Commissioner of Singbhum sent perwannalis to the Rajah of Seraikela, who exhibited a disinclination to encourage vaccination, expostulating with him on the subject, and addressed the Thakoor of Pera, who was inclined to prove obstructive. requesting him to render every assistance in his power. The Deputy Commissioner of Lohardugga wrote to the Brahman zemindar of certain villages in thana Daltongunge, requesting him to desist from opposing vaccination. In the Sonthal Pergunnahs Circle, the District Superintendent of Police, Monghyr, the Sub-divisional Officer of Beguserai, and the Sub-Inspector of Police, Surajgurah, evinced real interest in vaccination. The two former officers assisted in having all the villages in their jurisdictions vaccinated, and the last-named officer introduced the measure in his thana. Zemindars Bhidanarayan Chowdury of Annurary and Sibsahai Singh of Madeanara in thana Monghyr induced the Moghya Babhans in their villages to be vaccinated. The Sub-divisional Officer of Pakour, Mr. E. McL. Smith, took great interest in making vaccination popular in his sub-division. In the Eastern Bengal Circle Mr. Fasson, the Magistrate, and Mr. Wilcox, the District Superintendent of Police, Backergunge; Babu Soshi Shekher Dutta, late Sub divisional Officer, Perozepore, and Babu Upendra Chandra Majumdar, the present Sub-divisional Officer, afforded cordial assis-During their tours they with the people to accept vaccination, and directed the subordinate police to render help in the matter, when called upon to do so. Even the zemindar of Khalshakali, a hostile opposer of vaccination, was induced so far as to issue perwannahs before the Superintendent to his ryots to accept vaccination. Babu Prasunna Chandra Mookerjee, Sub-Inspector of thana Backergunge, took great interest in the matter. It is hopeful to find chowkidars helping the cause of vaccination. In some villages in this circle they gave shelter to the vaccinators when they could not get it elsewhere, and had their own children vaccinated first, as an inducement to others to accept the measure. In the Behar Circle the Sub-divisional Officers of Bhabuah and Sasseram afforded commendable aid.

was introduced during this year into the This Enactment Extension of the Compulsory Vaccination Act V (B.C.) of 185c and other particulars relating to the Amendment and Working of this Law.

Dinajpur. Nattore. Serajgunge in Pubna. Kuracour Kendrapara. Balasore. Puri.

towns named in the margin. It was also brought into opera-19 other towns tion into immediately after the close of this year, viz., on the 1st of ${f April}$

Shortly after the close of the year, Act II (B.C.) of 1887 amending the above law was passed. The amendments consisted in provisions having been made (1) for vaccinating unprotected children within 15 days from date of serving notices; (2) for inspection, after vaccination, of children in eight days or earlier; (3) for empowering the Health Officer of the Port of Calcutta to cause persons on board of vessels (certain vessels excepted) arriving in Port with small-pox to be forthwith vaccinated; and (4) for ensuring access to vaccinating officers into houses, vessels, or other places in Calcutta,

its Suburbs and Howrah, for the purpose of ascertaining whether the inmates

are protected or not.

The first of the abovenamed Enactments was more or less satisfactorily worked in many towns, particularly the Sudder ones; but defects in its administration were observed in the great majority, particularly in the minor towns, prominent for mal-administration being those hereinafter mentioned. Nevertheless, in very many towns the introduction of the law has greatly assisted in removing objections to vaccination, and in some, although its machinery is not worked, the simple fact of its existence in them, it is believed, makes the people yield to vaccination. In several towns again, where the law has been long in force, its utilization from year to year has brought to notice large numbers of unprotected subjects, to detect whose presence the to notice large numbers of unprotected subjects, to detect whose presence the searching powers of the vaccinating and supervising officers would have been otherwise exercised in vain. In the towns in which the law is in force—113 in number—93,066 vaccinations were performed against 95,635 during the preceding year, showing a decrease of 2,569 operations which chiefly occurred in the towns where the working of the Law is faulty. In the South Barrackpore town vaccine depôts were not opened, fees for house vaccinators were not levied, and notices not issued. In the Bariepore town the law had not yet reached six or eight Ferazi families. In the Kushtea and Basirhat towns no vaccine depôts have been opened, notices were insufficiently served no presentions for evasions were instituted and were insufficiently served, no prosecutions for evasions were instituted, and home vaccinations were performed free of charge. In the Darjiling town the law cannot, it is said, be fully utilized for want of a proper agency. In the Rungpore town the law, though introduced in 1880, is not yet properly worked, because the people are perfectly indifferent to vaccination, and refuse to attend the vaccine stations, these being the very reasons why the law should be enforced. In the *Chattra* town also the law is not properly enforced. In the North Barrackpore, South Dum-Dum, Naihatti and Buraset towns, the suggestion of the Deputy Superintendent of Vaccination, Metropolitan Circles, to open out vaccine depôts was not complied with, the Commissioners of the North Barrackpore Municipality being of opinion that the depôt system would reduce the number of vaccinations, as many of the people dislike to resort to vaccine depôts; and it appears, moreover, that the vaccinators also entertain the same objection. In the Sherpur town in Bogra, although the law was introduced in January, no vaccinator was appointed to carry on vaccinations. In the English Bazar town the provisions of the Act are a deadletter, because the Commissioners, although asked, will not appoint a paid

Dainhat.
Cutwa.
Kumarkhalli,
Ranaghat.
Meherpore.
Santipore.
Taki.
Mozufferpore.
Pubna.
Bogra.

North Dum-Dum.
Ramjibanpore.
Chundrakona.
Khirpoy.
Sonanukhi.
Jalpaiguri.
Barrackpore Cantonment.
Bishenpore.

vaccinator. In the towns named in the margin either one or more of the following requirements of the law were not given effect to:—Vaccine depôts were either absent, insufficient, or not resorted to; home vaccinations were carried out without fees; notices were not served; no prosecutions were instituted; and vaccinations

were carried on for very short periods. In the following Municipalities the law is not at all, or very nominally, administered, viz., Baduria, North Barrackpore, Debhatta, Dum-Dum Cantonment, Jungipore, Kishnaghur, Comilla, and Brahmanberia. The reason assigned in Jungipore for this omission is that no occasion arose to exercise the provisions of the law, and in the three last named towns that its mere existence in them has a great power for good. It is gratifying to record that in the Bhagulpore Municipality houses to serve the purposes vaccine depôts were given rent free by influential native gentlemen. The Joint Magistrate of Kurseong advocates the introduction of this law into his Sub-division. He does not believe that there can be any serious objection to its application to all cooly lines in the numerous tea plantations, if vaccinators can be found to undertake the work. The Assistant Surgeon of Bankura also strongly advocates (and the Magistrate supports his recommendation) the introduction of this law into the district for the effectual prevention of small-pox. For a similar reason, Dr. Bose, the Medical Officer of the Northern Bengal State Railway, urges its introduction into the stations on the Railway lines, but the Act must be recast

for rural areas as in the Sudder thanas of the Bhagulpore district to which it has been introduced it cannot be worked.

156. Vaccination was offered to the Mahomedan pilgrims in two vessels on their return from Mecca with small-pox in their vaccination in the Port of Calcuttan midst, but they declined to accept it. The provisions of the amended Act, referred to in a preceding paragraph, will, however,

meet such refusals in future.

Extension of Act IV (B.C.) of 1835 prohibiting Inoculation, and the localities in which Inoculation is practiced.

of 1865 prohibiting the practice of inoculation was introduced during this year into the Barisal, Nulchiti, Jhalakati, Gournadi, Mehendigunge, Backergunge and Sarupkati thanas in the Backergunge district; and into thanas Kendrapara, Aul, p. Cuttack. The places to which the Law has not

Salipur, and Patamondai in Cuttack. The places to which the Law has not

Chittagong district. Bownhal. Thana GUNGE. Perozepore. Mozufferpore " Bhaduria. Durbhanga Barabanuddi. Balasore Golachipa. Gulsakhali. Puri ,, ,, ĭ Sarun Gya, excepting Jehanabad thana. Mathberia. Cuttack. Chumparun district. Tirtol. ,, Jagatsingpore. Banka.

yet been extended are named in the margin. Excepting the places enumerated below, inoculation is not practised any where.

In the Eastern Bengal Circle, in Chittagong, and the thanas in Backergunge in which the abovementioned law is not in operation, inoculation is encouraged by the

well-to-do people Sonthal Pergunnia Circle.—In the Monghyr district, although the prohibitory law is in force, people prefer inoculation to vaccination Fifteen cases of infractions of the law were detected and reported to the Magistrate. Behar Circle.—Inoculation is rarely practised in Patna; to some extent in some parts of Shahabad, and extensively in Mozufferpore, Durbhanga, Sarun, Gya, and Chumparun. Orissa Circle.—Here it is freely practised in all places to which the prohibitory law has not been extended, and clandestinely in places where it is in operation. It was found in this circle that outbreaks of small-pox could not be arrested in some places owing to inoculation being practised while vaccination was being carried on for the purpose, and that several deaths were caused by inoculation. Fourteen cases of infractions of the prohibitory law were detected in the Sub-division of Jajpur, where that law is in force. Prosecution and punishment followed.

158. In paragraph 61 of this Report it has been shown that small-pox Influence of Vaccination on Small. prevailed in 1886 with unprecedented mildness, and I attributed this, to a great extent, to the steady and extended progress which vaccination has made within recent years. I cannot sub-

years. I cannot submit better evidence in support of this view of the subject than the figures presented in the marginal table showing the death-rates from small-pox during the quin-

		BER O				DEATH-RATE FROM SMALL- POX PER MILLE OF POPULATION IN—					
	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1889-83.	1883-44.	1884-65.	1885-96.	1986-87.	
Areas under Vaccination Areas not under Vaccination	399 180	430 149	463 116	472 107	489 91	18 20	·12 ·25	*15 *55	.06 .56	·02	

quennium 1882-83 to 1886-87 in the areas which were under vaccination to a more or less extent, and in those which were not under vaccination. I regret that complete data are not available to enable me to carry the examination further back than the year 1882-83. These figures conclusively indicate that the mortality from small-pox in the areas under vaccination declined steadily and sensibly as protection by vaccination was being gradually extended; but that it was higher and fitful in the areas not under vaccination, although their numbers were being reduced year by year.

159. This information was called for during the year by Mr. Risley, the

Castes of, and other particulars Officer appointed by Government to make ethnorelating to Vaccinators and Inoculators in Bengal. It was supplied to
him, but as it is important and practically useful, I

have re-produced it here.

Castes of the Bengal Vaccinators.—In the subjoined table are shown the castes of the vaccinators employed in Bengal, under the heads of Hindus, Mahomedans, Christians, and other races:—

		 									سحد							
		N			DW VAC					0	N			VACC MPLO				.cn
Castr	ø.	Metropolitan Circles.	Darjiling Circle.	Ranchi Circle.	Sonthal Pergunnahs Circle.	Eastern Bengal Circle.	Orises Circle,	Behar Circle,	Total.	CAUTES.	Metropolitan Circles.	Darjiling Circle.	Ranchi Gircle.	Southal Pergunnahs Circle.	Eastern Bengal Circle.	Orissa Circle.	Behar Circle.	Total,
Впаны	NS.		Ì			Ĭ		Ī	1	OTHER HINDU	Ī							
Rarhi Sroni Burno Barendra Madhya Sreni Utkal Bashista or Ba Suckuldipi Kanoga Burwaria Kanoga Gaur Acharjee Vat Babhun OTHER HINDE Kaistha Haidya Khetri Rajput Bashnuh	 	 95 3 1 16 5 1 67 3 67 4 1 2 2	5	56 10 5 	30 	31 11 8 1 32 	14		220 14 4 16 19 4 10 5 4 1 1 183 5 8 8 8 8 8 8 8 19	CASTES—continued. Sudgope Pode Gowala Moduk Sutradhar Kahar Suri Parita Parita Parita Parita Parita Renia Koiry Sonar Mohamedans CHRISTIANS	5 1 2 1 		3 28	39 1 	3 1		 19 1 2 1 	8 1 6 4 1 1 4 2 1 2 2 2 2 2 2 2 2 2 3 5 5 5 5 5 5 7 2 2 2 2 2 3 5 2 5 5 7 2 2 5 7 2 7 2
Baishnub Jogi Barher Chasadhoba Chundal Tewar Kurmokar Tanti (weaver) Jelia Kaiburtta Malakar (Mali) Kumar (Potter Teli Baroor	···	5 19 21 1 11 3 1 6 2 4 3 24 4	8 13 	7	7 6 1 1 1	6 14 2 9 1 1 4 1 1		 1 2 51	17 25 42 8 20 7 1 20 3 19 116 21 5	OTHER RACES. Sinduria Uraons Dosadh Paharhia Khandaet Majec Kanoo Dhenook Momir Jodhpati Masadar Gotpam		6	22 3	2 15 3 5 2 8 1		2		24 3 16 2 15 3 5 2 8 1

Castes of People in Bengal who practice Inoculation.—In the Metropolitan Circles.—Madhya Sreni Brahmin, Utkal Sreni Brahmin, Kaistha, Chasadhoba, Barber, Jugi, Chundal, Tewar, Tanti (weaver, Acharjee, Kaiburtta, Chhuttri, Rajput, Kumar, Teli, Barooi, Sudgope, Vat. In the Darjiling Circle—Brahmin, Mahomedan, Kaistha, Rajbungshi, Kaiburtta, Dass, Malakar, Barber, Potter, Nomosudra, Kurmokar, Harhi, Ramat Baishnub. In the Ranchi Circle.—Brahmin and Sinduria. In the Sonthal Pergunnahs Circle.—Brahmin (Rarhi), Kaistha (Utter Rarhi), Baishnub, Ganak, Brahmin, Dosadh, Mali, Gotpam, Tatwa, Sinduria, Gope, Dhanook, Momir, Jodhpati, Hajam, Kanoo, Tewar and Masadar. In the Eastern Bengal Circle.—Brahmins (Rarhi, Barendra, Burno and Acharjee), Kaistha, Napit, (Barber), Jogi, Chundal, Malakar Purso, Dass, Barooi, Gope. In the Orissa Circle.—Utkul Brahmin. In the Behar Circle.—Mali, Acharjee, Kaistha, Tutwan and Gowala.

Religious ceremonies observed at the time of Inoculation and Vaccination.— Darjiling Circle.—Prior to inoculating, the old inoculators used to give previous notice in two or three villages at a time, fixing a certain auspicious day on which the unprotected children were to be brought to a certain place where the goddess Shitala was worshipped. When the people assembled, offerings of milk, fruits and other things were made to the goddess, and then the operations took place. On the 21st day after the operation the children were again collected on the side of some river or tank, and similar ceremonies having been gone through they were bathed. People did not think that small-pox was a disease, but "taking it by the name of the goddess Mata Bhowani worshipped it." This practice still lingers among some illiterate and ignorant persons. In some, but few, places some religious ceremonies are at present performed after vaccination by the Brahmin of the family, the vaccinators having nothing to do with them. Ranchi Circle.—The people in general in the districts of Manbhum and Singbhum object to take vaccination from any other castes

than Brahmin, and those in Hazaribagh from Mahomedans. The following religious ceremonies which used to be observed at the time of inocalation, are still practised during vaccination by people who regard vaccination, like inoculation, as a religious rite; but the practice, which was universal when vaccination was newly introduced, has died away in the greater part of the districts in this circle with the spread of vaccination, excepting in Kashipur, Barabazar, Manbazar, and Echagurh in Manbhum and Seraikela, Kharsowan, &c., in Singbhum. The ceremonies observed are:—The people do not shave their beards or crop their hair, nor have their clothes washed. They avoid anointing their bodies with oil, and abstain from fish or flesh as a part of their meals and power use turnoric in their curries. It must be as a part of their meals, and never use turmeric in their curries. It must be mentioned that in 1885, when small-pox broke out in Kashipur, the seat of the Raja of Pachet, an earthen pot filled with water called the rakshyabari was worshipped. This ceremony was established by the Raja to protect his town from further attacks of the disease. The Brahmins who performed pujas to the goddess 'A Shitala" for a period of three weeks distributed what are called rakshyakabojies to the people who wore them round their necks and arms, and thought themselves proof against any attack of small-pox. Rakshyakaboj is a small hollow round copper vessel containing a flower, or a portion of it, with which the goddess "Shitala" is worshipped. Similar ceremonies are also observed in the Political estates and in many places in the Hazaribagh and Lohardugga districts.—Sonthal Pergunnahs Circle.—Here a pot used to be filled with water when a child was inoculated, and this pot of water worshipped for about a fortnight. This custom is also observed at present. When a child is to be vaccinated, the lancet is washed with a little water out of this pot before operating and afterwards, in respectable families, this pot of water is worshipped as "Mata—" goddess of small-pox—for about a fortnight. Amongst the lower castes the water of the pot is thrown away roon after the operation, but some families throw it away after five days. Behar Circle.—In this circle on the day of operation the child is made to take his seat on a clean and well-leeped place called chooka, and within that chooka the child is operated on. From the time of operation the inoculators sing prayers every morning and ovening. On the 5th or 6th day they generally administer oil mixed with water to the operated child; but the popular belief is that small-pox scales dissolved in water is given, and this is called by the people "ghouty." From that day till the 14th or 15th day all the members of the family abstain from taking oil, fish, meat, and huldi, and clothes are not given to the washermen, nor alms to beggars. On the 14th or 15th day oil is touched to the body of the operated child, and the regular puja to the goddess Mata or Shitala takes place; but sometimes the puja takes place in a heter date. The zemindars and other influential men still observe these ceremonies in connection with vaccination. Orissa Circle.—The inoculators while performing operations upon a person pronounce some secret muntras, which are heard and understood by them only. Inoculation is generally followed by small-pox, which is regarded as a goddess, and is called by the name of "Shitula Takurany." The person inoculated is made to lie down in a separate room, and the inoculator keeps an earthen pitcher of water near his head, with a mango tree twig dipped in it, and a cocoanut This pitcher is kept there for seven days as the representplaced over its mouth. ative of the goddess Shitala. During these seven days the inoculator reads slokas or verses of praise in the name of "Shitala." These verses are 90 in number, but eight of them are the most important, hence the ceremony is, after these eight verses, called "Shitalaslaka." These verses or slokas are divided into three parts. The first part consists of the praises of "shitala" and the various miracles wrought by her since the creation of the world; the second shows how she is the author of small-pox; and the third consists of prayers for averting her wrath, and requests her to go away after accepting the offering presented to her. The patient after the ceremony of these seven days is over, makes some offerings to the goddess, and then the ceremony ends.

SECTION VIII.

SANITARY WORKS (MILITARY).

160. The Sanitary Commissioner for Bengal is not required to furnish information under this head.

SECTION IX.

SANITARY WORKS (CIVIL).

Total Income of the Municipalities, and the Objects to which it was applied in 1886.

161. The information marginally indicated is presented below, collated from the returns of 137 Municipalities:—

	ies.	ng balance	PERCENTAGE OF INCOME EXPENDED ON-						ies.	ng balance	Percentage of Income extended on—					
Districts.	of Municipalities.	in 1886, including he last year.	Sanita Work	s.	Works, includ- ads,		Other Requirements.	Districts.	of Municipulities	Income in 1886, including balance from the last year.	Saui Wo	tary rks.		Works, includ-		Other Requirements.
	Number	Income in from the	1886.	Roads.	Sanitary Woring Econds,	Police.	Other B		Number	Income from th	1886.	1625.	Roads.	Sanitary Wor ing Roads.	Police.	Other B
		Rs. a. p.								Rs. A. P.						1
Burdwan Barkura Birbhum Midnapore Hughli including Serampore Howrsh 24 Pergunnan Nuddes Jessore Murshidabad Khulna Dinajpur Bajahahye	6 3 1 6 8 2 1 1 9 3 4 4 1 2	1.27,518 0 0 0 27,501 6 11 7,507 7 2 50,214 6 2 1,68,640 2 1 7,30,7689 11 1 7,30,401 0 0 85,242 0 0 20,720 14 3 99,141 11 6 10,416 14 5 25,500 5 11 37,575 8 4	25.75 27 42.90 54 54.00 51 81.11 35 81.09 57 83.55 38 85.93 28 85.93 28 42.50 42.50 44 47.66 44	3.49 15.75 7.88 6.94 4.41 3.98 1.20 15.30 8.00 22.78 7.62 18.50 8.87 21.47 9.61 27.43 2.00 14.55 9.68 21.52 9.68 21.52 9.68 21.52 9.68 21.52 9.68 21.52 9.68 21.52 9.68 21.52 9.68 21.52	59 ne 32 00 46 88 69 30 53 89 449 66 55 03 63 37 53 26 55 33 53 74 49 60 54	8·57 5·69	22.62 25.90 6.03 16.90 23.59 17.53 19.54 15.61 13.16 14.86 17.62 4.72 10.49	Tipperah Patus Gya Sushabad Mozufferpore Durbhangs Sarun Chumparun Monuhyr Bhagulpore Purneah Maldah Sonthal Pergunnah	2356455232122	81,082 0 0 0 1,39,608 4 1 81,035 9 2 58,102 0 0 44,410 10 3 51,152 1 0 67,164 4 10 21,670 9 0 63,577 0 0 59,455 2 3 20,449 3 4 13,271 0 2 17,440 7 8	39-17 39-23 46-32 45-83 26-67 34-57 31-31 47-14 46-03 38-28 33-09 30-89 51-25	\$1.65 47.9; 47.23 43.17 25.12 36.26 40.8; 46.71 18.67 36.29 19.68 37.11	20:39 28:39 9:19 16:55 20:50 18:60 6:04 11:75 15:44 23:32 25:79 22:41	59'56 67'61 55'51 62'88 47'18 53'17 37'36 68'89 61'48 61'61 59'88 62'31	**************************************	27:23 13:40 26:05 13:07 30:05 20:19 28:01 20:97 14:17 15:10 14:89 19:41 8:04
Rungpore Bogra Pubna Darjiling Jalpaiguri Daoca Faridpore Faridpore Mymensing Chittagoug Noakhali	1 2 2 1 2 3 4 6 2 1	19,365 6 6 15,746 0 0 25,939 14 11 1,46,513 8 11 9,555 13 1 1,86,575 0 10 21,515 4 4 51,997 12 5 47,277 4 0 35,687 0 0 6,258 10 10	89:35 87 20:56 25 46:45 82 46:64 51 43:49 80 58:64 62 38:26 42 61:73 47 36:85 23 30:27 28	7:50 4:47 14:79 14:79 16:31 196 8:95 140 1:42 2:62 12:77 12:38 9:52 13:56 23:97 108 28:90 13:37 9:80	43'89 41'36 63'74 .55'59 44'92 71'32 51'10 61'26 60'82 59'18 52'08		15:96 38:36 20:66 12:31 5:53 8:10 22:21 10:64 15:36 34:66	nany Cuttack Puri Halasore Hazarıbagh Lohardugga Singohue Manbhue GRAND TOTAL	1 1 1 1	48,966 13 9 46,724 0 0 13,22 3 4 15,892 9 10 11,872 5 7 5,465 6 10 10,443 11 3	84-67 40 07 35-14 54-37 41-93 52-90 51-09	84.45 88.95 82.79 50.19 41.66 16.06 59.49	11:99 8:37 21:14 8:57 9:98 7:72	46.66 45.45 56.38 6.594 51.91 60.62 58.43	1.70	8'04 22'50 16'99 13'23 10'69 26'75 15'49 11'03

The above table shows that, in comparison with the preceding year, there was an increase in the total income which accrued to the Municipalities to the extent of Rs. 43,348, and that in its distribution larger amounts were allotted for roads and police, and smaller for sanitary works (original and recurring) and "other municipal requirements—" the increment being represented by 1.38 and .09 per cent. of income, and the decrement by 1.63 and 1.81 per cent. respectively. It is thus seen that, although there was an increase of income, the apportionment for maintaining the sanitary status of the towns was, on the whole, curtailed. In estimating the returns of the towns individually, it is found that 44 against 35 in 1885, expended appreciable proportions of their respective resources, viz., 40 to 69.70 per cent., in improving their condition generally; while 24 against 15, allotted very insignificant proportions—3.74 to 19.40 per cent.—for the same purpose. The rest of the towns, numbering 69 against 83,

diverted in the similar direction proportions of income ranging between 20.07 and 39.66. I will comment on this expenditure in a subsequent paragraph of this section.

162. The various purposes to which the amount apportioned for the specific objects on which amount sanitation of the towns—Rs. 11,92,389 (exclusional for sanitation was expended., sive of Rs. 5,54,539, the cost of constructing

HEADS OF EXPENDITURE.	Tô Expen		Difference in 1886.			
•	In 1886.	In 1885.	Increase.	Decreaso.		
	$\mathbf{R}_{\mathbf{s}}$.	Rs.	Rs.	Ra.		
On Conservancy, including Latrines Establishment Drainage Water-supply Disposal of Dead Markets and Slaughter-houses Vaccination Treatment of the Sick Other Sanitary Works	8,60,591 8,41,439 75,269 81,237 6,626 7,489 14,965 1,89,804 1,04,975	3,80,714 2,91,828 52,363 1,57,806 7,544 24,451 16,417 2,04,078 e97,503	49,605 22,906	20,123 76,129 918 16,968 452 8,274		
On construction, maintenance and repair of Roads	11,92,389 5,54,539 *	12,25,264 5,04,811	49,728	32,875		
Total, including Roads	17,46,928	17,30,075	16,853			

and maintaining roads) against Rs. 12,25,264 in 1885—was devoted, and the exact amounts which were expended for each of such purposes, are shown in the marginal table, in contrast with the similar expenditure of the preceding year. The comparison indicates an increase under the heads of Establishment, Drainage,

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and "Other sanitary works," prominently Establishment, against a decrease under all the other heads, specially Water-supply. The pressure which I had brought to bear, during my inspection of towns, on the inadequacy of the establishments entertained in many of them for conservancy purposes, and on the advisability of having private privies cleaned by municipal mehters under the provisions of Part IX of the Bengal Municipal Act, led to the establish-

Bhagulpore.
Monghyr.
English Bazar.
Gya.
Motihari.
Barisal.
Kishnaghur.

Soori.
Midnapore.
Patna.
Dacca.
Comillah.
Julpaiguri.
Pubna.
Arrah.

ment of many towns being strengthened, most so of those named in the margin, in the last six of which the increase is mainly attributable to the house-service scheme having been introduced into them. Hence the increase under the head of "Establishment." The enhanced expenditure on "Drainage" is due mainly to larger sums having

been expended on drainage works in this as opposed to the preceding year in towns in the following districts: -24-Pergunnahs (Rs. 14,010, against Rs. 9,158), Darjiling (Rs. 9,833, against Rs. 4,461), Dacca (Rs. 8,241, against Rs. 4,149), Murshidabad (Rs. 6,190, against Rs. 4,811), Nuddea (Rs. 3,345, against Rs. 2,427), Rungpore (Rs. 2,121, against Rs. 425), Purneah (Rs. 2,108, against Rs. 457), Midnapore (Rs. 1,946, against Rs. 299), and Maldah (Rs. 1,654, against Rs. 646). The large diminution under head "Water-supply" is traceable to considerably larger expenditure having been incurred in 1885 than during this year in towns in the districts of ~1-Pergunnahs (Rs. 63,156 in 1885, as opposed to Rs. 336 in 1886), Burdwan (Rs. 40,068, against Rs. 26,777), Howrah (Rs. 6,043, against Rs. 3,950), Midnapore (Rs. 2,659, against Rs. 321), Faridpore (Rs. 2,575, against Rs. 175), and Jessore and Murshidabad (Rs. 1,706 and 1,203 respectively, against nothing). The reduction in cost for "Conservancy, including latrines" is seen in the Dacca town, the returns of which show an expenditure of Rs. 69,265 in 1885 against, most curiously, nothing during the year under report. I, however, suspect that some portion of this amount has been entered under the head of "Conservancy Establishment," which shows an expenditure of Rs. 58,418 in 1886, against only Rs. 4,226 in 1885. Almost the whole decrease of expenditure under the head of "Markets and Slaughter-houses" occurred in the Darjiling Municipality, where Rs. 16,532 were expended in 1885, against Rs. 285 this year, the greater portion of which was laid out in improving the covered market in that Municipality. The reduction under the head of "Treatment of the Sick" is clearly traceable to the larger allotment which had to be made in 1885 for this purpose in most towns, in connection with the heavy inundation of that year.

163. The statistics above furnished, and the observations made thereon, refer to the gross expenditure incurred for sanitary purposes, including recurring charges incidental to every year. I now solicit attention to the statement published as Appendix No. IV to this Report, showing the percentages of income expended by all the towns in Bengal separately for carrying out Original Sanitary Works. Against these percentages will be found

for purposes of comparison, the proportions of income spent

Olivor Cu,		. F.	F - 1					,
		Percentare of Income on ori- ginal Sanitary Works.	orceothe come on the B require	Percentage of 119. come on all Municipal requirements.	•	Percentage of Income on vriginal Santary Works.	Percentage of Income on recurring Sanitary requirements. Percentage of In-	Manicipal re-
Kendrapara Sherpur Bodyabatti Kumarkhali Naraingunga Shahobgunga Kiahoregunga	•••	44.62 41.13 29.68 27.55 27.15 26.78 25.76	6.72 17.03 37.42 30.51 20.47 46.03 22.19	32·19 23·97 28·61 21·60 31·74 16·76 46·48	North Barrackport Nattole Puri see Bazitpore Pubna Muktagatcha Burdwan	28 65 23 29 22 62 23 13 21 87	25.00 48.38 49.15 38.86 8.43	26:25 40:24 23:75 24:04 35:04 36:10 29:94

income for original Sanitary Works calculated to secure permanent benefit to

Dinsjpur Hughli Rungpore Darjiling Durbhangs Scrampore Faridpoie Monehyr Comillah Gya Chupra Cuttack Motihari		Percentage of Income on orthograph of the Carlotte of Income on orthograph of the Carlotte of	Decentage of In-	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Kishnaghur Arrah	Percentage 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	62'41 52'22'48 51 49'14'80'30 58'51 66'50 50'96 58'69 69'84 46'23 72'28 81'02	December of 11:58 20:50
Mozusterpore Balasoro	•••	0.48		26 67			1	

less than 31 towns expended nothing on original Sanitary Works, among them

	Percentage of Income on ori- grad Santary Works.	Percentage of Income on recurring Sanitary requirements	Percentske of Income on all Municipal requirements.			Percentage of Income on original Santary Works.	Perrentage of In cone on recurring Santary requirements.	Percentage of Income on all Municipal requirements.
Howrah Jessore Rampore Beauleah Bogra		50°08 58 61 66°93	29°34 18°43 24°51 51°83	Julpaiguri Dacca Chittagong Ranchi	::		44.93 78.65 Go:71 51.91	17:43 13:68 38:42 34:13

on other sanitary requirements (which annually recur) and the proportions which were allotted for civic expenditure proper. From this statement it will be seen, (1) that only the 14 towns named in the margin allotted fair of their proportions

them, and that of them only three are Sudder and the rest towns minor ones; (2) that so many as 66 towns expended very insignificant proportions, ranging between 9.84 and ·24 per cent. of income in this direction, and that of this number 30 are sudder towns, viz., cited in those margin; (3) that, what is worst of all is that, no

being the eight Sudder towns marginally indicated; (4) that 86 towns assigned undue proportions of their income to ordinary Sanitary requirements of an annually recurring char-

acter; and (5) that 21

towns acted similarly with regard to municipal expenditure direct.

A few out of the many instances of misdirected expenditure to which the anomalies above exposed are traceable, and which also point to how little interest Municipal Misdirected Expenditure.

Commissioners often take in advancing the sanitary welfare of the towns committed to their charge, may be quoted; as a great deal of money is thus laid out, particularly on Education, Lighting and Road-watering, which could be more beneficially employed in correcting the many grave sanitary defects which exist in the towns which indulge in such expenditure. Government interference in this matter is strongly indicated. In Meherpore Rs. 560 were spent on education out of an income of Rs. 3,384. The very defective drainage of Berhampore cannot, it is said, be improved for want of funds, yet large amounts are expended yearly on lighting, watering roads and education. Kandi town cannot be provided with a water-supply and public latrines for want of funds, yet money is spent on road-watering and education. In the Jhalokati town, while nothing was spent on vaccination, treatment of sick, and water-supply, and only Rs. 12-8 on drainage and Rs. 5-13 on disposal of the dead, so much as Rs. 510 was diverted towards lighting the town. In the English Bazar town want of funds is pleaded against the suggestion to provide a night-soil trenching ground, while a large expenditure was incurred for education and a considerable balance kept in hand. In the Gya town excessively large amounts were expended on lighting, roadwatering, and education, and the funds of the Lodging-houses were diverted to expenditure on roads. In the Durbhanga town the roads are watered to the detriment of other more important sanitary needs. In the Chupra town a municipal

market is proposed to be constructed, and Rs. 5,000 have been budgetted for providing increased accommodation in the dispensary, while a system of drainage is a crying want in it. In the Puri town 100 lamps are lit at a very heavy expenditure which might have been diverted to other more useful purposes. The Calcutta Corporation offered to put up hydrants for Rs. 2,400 in the South Barrackpore town, and to supply it with water for Rs. 890 annually; but the Commissioners rejected this important proposal, and spent Rs. 1,978 on education, and set aside Rs. 4,000 for an office. They also pay for naming roads and for sign-boards, while they have no sweepers. The Nawab of Dacca made over to Mr. Lyall, the Commissioner, Rs. 5,000 for the use of the town of Comillah, but this amount was permitted, at the request of the Municipal Commissioners, to be wasted on such a secondary requirement as street lamps. In the Suburbs of Calcutta proper drainage is admittedly a great want, but only Rs. 7,739 were spent for its improvement, while lighting and watering roads cost more than Rs. 53,000. In the Baduria town the expenditure on municipal establishment was nearly ten times as much as that for conservancy establishment. The Commissioners of the Busirhat town, although strongly urged by the Sanitary Department to stop the practice of burying the dead inside premises, by providing a burial-ground, would not introduce this very necessary reform, but spent Rs. 1,500 on schools, and also maintain lights in the streets. the South Dum-Dum town, while night-soil is not removed from the privies, Rs. 521 were spent on schools and Rs. 300 on road-watering. Dr. Gupta recommended the provision of a burial-ground for Mahomedans in the North Dum-Dum Municipality, but the Commissioners pleaded poverty, and yet they spent Rs. 684 in keeping up schools, granted Rs. 600 to repair them, and kept in hand a large unexpended balance. They do not support patshalas, but schools apparently suited for the education of the higher classes. In the Baranagore town, while not a single pice was spent on its drainage which is defective, Rs. 1,700 were expended on schools and Rs. 1,207 in litigation. and important towns of Hajcepore and Lalgunge, the former of which constructed a latrine by voluntary subscription, were able to spend money on lighting. The small towns of *Tikari* and *Roserah* expended Rs. 468 and 852 respectively on education, and of Purneah Rs. 940 on lighting roads.

Notwithstanding the misdirection of the funds in the manner above set forth, the original sanitary works which were Summery of Sanitary Works executed in Towns and Districts and by executed during the year, as disclosed in the private individuals. subjoined summary, taken from Appendix III to this Report, hold no unimportant position in having materially promoted the sanitation of the localities where they were undertaken. The figures in the number columns of these statements are short of the actual numbers, as in many cases the local officers omitted to note the numbers of the drains, roads, tanks, wells, &c., which were constructed. Moreover, several sanitary works, mentioned in the Appendix above alluded to, do not appear in these abstracts The last of these abstracts owing to their cost not having been returned. show the contributions to the cause of sanitation by private individuals. These works should not be considered as possessing small value; for although

they were primarily conceived in a religious spirit, and are infinitesimal as compared with the great needs of the Province at large, they no doubt promote

the health and well-being of a large number of people who are affected by them:—

IN THE TOWNS. (Carried out from Municipal funds, and in a few cases from Road Cess funds.)

No	Nature of works.		Amount.	No.	Nature of works	Amount.
	Drainage.		Rs.		· Water-supply.	$\mathbf{Rs}.$
45 Puc 25 Kut 8 Dra 3 Em	ninage schemes ca new drains constructed teha ditto ditto nins improved chankments constructed verts provided	•••	11,434 11,608 1,018 8,330 821 9,086	6 45 64	Filtered water-suppply schemes Tanks excavated Do. re-excavated Wells sunk Ghâts and bridges to tanks constructed Water reservoirs provided	22,079 4,403 2,417 4,641 4,144 168
	Total	•••	42,297		Total	37,882

No. Nature of works Amount No. Nature of works Amount Rs.		•			•			
Roads and lanes constructed 22,123 3 Markets and Slaughter-houses 1,741 110 Ditto new metalled r 40,231 3 Slaughter-houses constructed 1,741 3 Slaughter-houses constructed 1,741 2,849	No.	Nature of works.		Amount.	No. Na	ture of works.		Amount.
Roads and lanes constructed 1,741 119 Ditto new metalled 1, 22,123 3 Markets constructed 1,108 1,741 1,008 1,008 1,008 1,008 1,008 1,008 1,008 1,008 1,009 1,0		&		Rs.				Rs.
79 Roads and lanes constructed 22,123				j	Marke	ts and Slaughter-hor	uses.	
Conservancy. 64 Latrines (masonry, iron, kutcha, and portable) constructed 10,880 25 Urinals put up 545 2 Cess-pools filled up 7,389 7 Conservancy buildings 3,071 23 Ditto plant 1,914 Total 23,799 Disposal of Dead. Disposal of Dead. Disposal of Dead. 5 Burial-grounds provided 938 1 Burning ghât provided 938 1 Total 938 2,645 Medical relief. 3 Charitable dispensaries and 1 asylum for paupers, &c	79 119	Roads and lanes constructed Ditto new metalled			3 Markets const	ructed	•••	1,741
64 Latrines (masonry, iron, kutcha, and portable) constructed 10,880 25 Urinals put up 545 2 Cess-pools filled up 3,071 23 Ditto plant 1,914 Total 23,799 Disposal of Dead. 5 Burial-grounds provided 938 1 Burning ghât provided 821 Total 938 1 Total 938 1 Total 938		Total	•••	62,354	49	Total		2,849
5 Burial-grounds provided 938 1 Burning ghât provided 938 Total Total 513	25 2 7	Latrines (masonry, iron, kutchs portable) constructed Urinals put up Cess-pools filled up Conservancy buildings Ditto plant Total	•••	545 7,389 3,071 1,914	3 Charitable dispersed for paupers, 4 Hospital for and the aged	pensaries and 1 asylude pilgrims, the destitute Total Miscellaneous.	ute	369 2,882
Total 1 750		Burial-grounds provided	•••		One Public Ga	rden for recreation		
Total 1,759 GRAND TOTAL 1,74,335	1.	Burning ghat provided	•••	821	a.	Total	•••	513
• • • • • • • • • • • • • • • • • • •		Total	•••	1,759	G	BAND TOTAL	•••	1,74,335

IN THE DISTRICTS.

(Carried out from Road Cess funds, and in some cases from Government funds.)

•			mas, and	THE BOTTLE CAP	es trom G	overnn	nen	tiuno	LB.)
No.	Nature of works.		Amount.	No.	Natu	re of work	s.		Amount.
	Drainage schemes.		Rs.		K	Roads.			R_{8} .
Number pot Especified.	Drainage schemes Pucca drains constructed Kutcha do. do. Embankments constructed		42,057 202 1,000 15,518	77 Roads con 2 Roads ne 10 Bridges co		•••	•••	 	73.053 10,720 18,458
	Culverts provided Total	•••	5,996 64,773		.M .a	irkets.		Total	1,02,231
	Water-supply.	•••		Markets			•••	•••	70
7 *54	Tanks excavated Wells sunk	•••	14,945 95	Land recl	aimed	ervancy 	•••	•••	742
1 20	Water reservoir constructed Khals excavated	•••	300 5,905	On Arbor		llaneou. 	s. 	•••	2,8 37
	Total	•••	21,245		GR	and Tot	AL	•••	1,91,898

^{*} The cost of constructing 52 of these wells has not been furnished.

PRIVATE CHARITIES.

		101	VAIL	лац	LLIES.		
No.	Nature of works.		Amount.	No.	Nature of works.		Amount
	Drainage.		Rs.		Roads.		Rs.
4	Drainage works Embankments	•••	728 2,049 - 2,777	10 2	Roads constructed Do. new metalled Bridges constructed	•••	2,508 5,800 200
	Water-supply	•••	- 2,777		Total	•••	8,508
164 3 2 33 1	Tanks excavated Do. re-excavated Ghâts and bridges provided tanks Wells sunk Reservoirs constructed	 to	1,17,346 4,700 1,600 6,711 300	2	Markets constructed	***	260
	Total	•••	1,30,657		GRAND TOTAL	•••	1,42,202

Important Sanitary Works completed, in progress, or commenced during the year.

Sanitary Works, mentioned in Appendix III to this Report, which are calculated to benefit the cause of sanitation materially. To these are added such similar works as were in course of construction, having been commenced in previous years, and those which were initiated during the year under report.

previous years, and those which were initiated during the year under report.

Water-supply.—In Darjiing town the water-works scheme was extended to Annandale location, to the meat-shed in the bazar, and to Goompahar bazar, and was

being extended to the Hindu cremation ground. I should here note that the water-supply question in this town is not so much one of deficient supply from the springs, as of too small a main from Senchal to Darjiling. Except during the very driest season, the supply from springs is ample. On the 1st May 1886, one spring filled the main completely, all other springs running to waste. Arrangements were in progress for extending the water-works to the dâk bungalow at Kurseong. A water-supply scheme has been brought into use in the Jamalpore town, in Monghyr, by the East Indian Railway Company. It consists in embanking a small valley in the neighbouring hills and conducting the water in pipes into the station. It is estimated to cost Rs. 64,807. The water-works scheme in the Bhagulpore town was being carried out, and is expected to be completed during 1887. A brief account of this scheme may not be out of place here. The want of good drinking-water having been long felt owing to the mouth of the Jamooneah river, which runs just below the town, remaining in a silted-up condition during a great part of the year, whereby its water is rendered stagnant and unfit for use, it was determined to provide the town with filtered water from the river Ganges. A scheme was therefore devised by which it was arranged to establish the head-works at Barari, where the main stream of the Ganges flows; to have the water filtered in tanks; and to convey it thence through pipes for distribution to the whole town. The laying of the main pipes was in progress, and branch pipes are to be connected to them, but how far the wants of the people will be met through the distributaries is a question dependent on the Municipality succeeding in raising a loan. The estimated cost of the measure amounts to Rs. 2,67,353. The greater portion of this sum has been raised by local subscription. The Barwari Rajah The greater has, with praiseworthy liberality, given a lakh, and Government has accorded a grant-in-aid of Rs. 50,000, and also the gratuitous services of its officers for carrying out the works. These water-works, though incomplete, were formally opened by Sir Rivers Thompson during the current year. I believe they will prove highly beneficial to the health of the townspeople, as the watersupply from wells, as well as from the Jumooneah, is undoubtedly bad. The scheme for supplying the Puri town with good drinking water by sinking wells, constructing settling tanks, and leading the water through iron pipes, referred to in paragraph 236, page 96 of my Annual Report for 1885, has been submitted to Government for approval and sanction, after an experimental well had been dug at a cost of Rs. 1,322 from the District Road fund, and the water thus obtained had been found to be abundant and pure. The cost of the entire project is estimated at Rs. 1,75,000, and it is proposed to raise this money by subscriptions, or by revenue a old tax on pilgrims. It is urgently necessary that some better water supply than the existing one should be provided for this town, where pilgrims assemble in large numbers; and now that the matter is in the hands of Government, it is to be hoped that it will be speedily brought to a conclusion. The unsightly malarious swamp to the east of the jail in the Hazaribagh town was converted into a lake by prison labor. is anticipated that the undertaking will exercise a favourable influence on the health of the residents. The water of the Ichamutti river, in the town of Pubna, was protected by means of embankments and bridges. The consideration of the long pending question of a filtered water-supply for the town of Howrah has been so far proceeded with as to foreshadow a hope of ultimate A survey and map of the portions of the town where the pipes will be laid is being progressed with, and the several questions connected with the engineering difficulties to be overcome, the quantity of water to be applied, the cost of the work, &c., are being considered. The water-supply scheme for the Riparian towns in Hughli and Howrah, alluded to in former reports, has not come to a final issue yet. The Scrampore Municipal Commissioners decline even to contribute towards the cost of the preliminary survey and of the preparation of plans and estimates for the proposed scheme, owing to having to pay for more pressing wants; but Baidyabatti, a smaller and more insignificant town, contributed Rs. 115; and, moreover, in Utterpara, although on the river, a few families obtain water from Calcutta, which affords a sufficient proof of how much filtered water is prized. It appears, however, that the Government has (in January of the current year) again pressed the subject on the attention of the Commissioners of Serampore, and that they are re-considering it.

question of extending the Dacca water-works to the whole town, which has been under contemplation for the past five years, is likely to be brought to an issue at last. Plans and estimates of the work have been prepared, and their details are being considered by the Commissioners.

Rupees 6,751 were advanced to landholders and superior tenants for excavating new and cleaning and deepening old In the Districts and silted up tanks in the Burdwan district. An important improvement was effected in the Jessore district by the removal from several parts of the river Bhyrub of the fishermen's bandals which used to obstruct its current and defile its water. The abatement of the nuisance has improved the water-supply. No less than 52 wells were sunk in the Rajshahye district. In the Sonthal Pergunnahs district a large embankment was drawn across a valley at Sharipara, on the Dumka-Ramporehat road, to store water and improve the gradient of the road. Several such smaller bunds were With reference to the water supply question of the principal stations of the Eastern Bengal State Railway, allusion to which was made in paragraph 237 of my Annual Report for 1885, it appears from the report of the Manager of the Railway that new pucca wells have been sunk at Kanchrapara, Kissengunj and Ramnagar; that an experimental well was being sunk at Aranghatta; that the tank at the Kanchrapara workshop has been deepened and brought into use; that the tank at Chuadanga was partly deepened, but that further progress was stayed by the rains; and that the filters in use at the stations have been rendered sufficient. With advertence to the suggestions made by me (vide page 33 of my Annual Report for 1885) relating to the precautionary measures required for preventing the outbreak and spread of epidemic disease among opium cultivators in places where they assemble for the weighment of opium, the Government of India sanctioned a grant of Rs. 2,000 for the improvement of the water-supply in the places in question in Behar, and also authorized the construction of one or more substantial sheds near every weighing station for the accommodation of the cultivators during the time of weighment.

Drainage.—The drainage scheme for the Dinajpur town, some time under contemplation, has been sanctioned by Government and is to be commenced shortly. The entire cost, amounting to Rs. 26,265, will be met, with praiseworthy liberality, by the Maharajah of Dinajpur. The drainage channels of the Berhampore town in Murshidabad, which pass eastwards to the Gobra nullah, were cleaned out at the expense of the Road Coss funds—a use to which such funds might be more extensively put with advantage. The Nuddea Municipality, aided by Rani Surnomoi, of Cossimbazar, and Rani Tara Sundari Devi, of Bhukoilas, improved the embankment which keeps the town from being flooded by the river. Saucer-shaped drains were provided in the northern portion of the Mahigunge bazar in the Rungpore town. The drainage of this town is very defective, and is seriously deteriorating by obstructions, interruptions, encroachments, interference with levels, want of or disrepair of culverts and drains, obstructions to outlets, non-drainage of the bed of the dead Ghagat and stagnation thereof in parts, &c. Moreover, the northern drain of the Dinajpur or sudder road ends in a series of deep excavations; the jail road drains have been badly cut by the Road Cess Department and require levelling; and the channel constructed under the suggestion of Dr. Ghose, joining the Ichamutti river at Mahigunge and the main drainage channel opposite Dalpoti, and draining the Nachine and Kachua bhils, has been so encroached upon and obstructed as to defeat the objects of the scheme. The Commissioners have a survey in hand for remedying some of the defects, and have purchased a large supply of Ranigunge pipes for use and for sale, at cost price, to householders for insertion in the paths leading from the road to their houses, but a thorough reform is strongly and urgently indicated. The drainage of the town of Darjiling was further improved A cess-pool, west of the Eastern Bengal Railway office in the Naraingunge town in the Dacca district, was filled up by the Municipality. The cost, amounting to Rs. 7,318, was paid by the owners of the cess-pool. Saucer-shaped drains were provided for parts of the Bettiah town in Chumparun. The important drainage canal in the Purneah town, referred to in paragraph 238 of my Annual

Report for 1885, which was commenced in 1884, was completed this year. The object of the work is to drain off the stagnant water from the town through a drain 12 feet wide constructed from the station towards Lalgunge, the branch drains from several parts of the town being connected with it. During the past rainy season the scheme worked satisfactorily. In the Balasore town the drainage works were being proceeded with by the construction of pucca drains along seven roads. These, works were commenced at a high point in the town, and are steadily being progressed with towards the outfall. The levels for the Mozufferpore drainage scheme, referred to in paragraph 238 of my Annual Report for 1885, were continued to be taken. Provision has been made in the budget for the completion of the outfall drain along the new chowk road in the Patna town, and for making it pucca to the south of the Railway. Arrangements have been made for making a survey and for taking levels of the towns of Bali in Howrah and Chanduria in Khulna with a view to carry out complete drainage schemes in them. With reference to the Durbhanga drainage scheme, the Civil Surgeon is of opinion that the money spent on it is simply thrown away. The levels are all wrong, the drains have no fall any way, and are a "succession of modified elongated pools." A proper drainage scheme for the town, based upon an accurate survey, is necessary.

In the Midnapore district the Surpai drainage scheme, referred to in my

In the Midnapore district the Surpai drainage scheme, referred to in my previous Reports, was being proceeded with, the cost of this year amounting to Rs. 42,057. The main object of this scheme, so far as sanitation is concerned, is to prevent the silting up of the Surpai khal flowing from Contai to the Rosulpur river, which had been going on for years, and thus to restore the drainage of the country in the neighbourhood of Contai in Hidjilli, and to render the khal a navigable channel. The excavation of the canal from Jajpur to Akhuapada, in the Cuttack

district, which was commenced in 1885, was still progressing.

Conservancy.—In the *Howrah* town it has been decided to remove in a steam tramway all the night-soil and sewage matter from its southern portion for burial outside of municipal limits. A loan of Rs. 50,000 for the purpose is to be raised, and the scheme is to be extended to the north of the town, as funds become available. Seventy well-privies were filled up in the Kishnaghur town in Nuddea. In the Hazaribagh, Chattra, Shahabad and Gya towns, the sale of refuse, which is otherwise thrown away, was commenced. In the two first-named towns it is taken for manuring purposes, and in the two last-named it is purchased by brick-burners. In the Gya town in addition, night-soil is sold to contractors. These examples might be imitated with advantage in other towns. In the Dacca town the "gors," referred to in my former Reports, were continued to be filled up; but this is merely a convenient way of getting rid of street-sweepings. The necessity for a food Inspector in the Puri town being greatly felt, and the Municipality being unable to pay an officer of this class such pay as would make him independent, the Puri Lodging House Committee proposed to assist the Municipality in the matter, provided the Inspector also undertook the appointment of Assistant to the Health Officer for the inspection of lodging-houses, inasmuch as an Assistant Inspector of lodginghouses was necessary owing to the Health Officer being unable to visit all the lodging-houses, over 800 in number, as frequently as was desirable, particularly during festivals. It was therefore decided to appoint an Assistant Surgeon on Rs. 100 per mensem, to which the Municipality agreed to contribute Rs. 30.

Bustis.—It is much to be regretted that owing to litigation and the consequent loss sustained by the Commissioners, the improvement of the bustis in the *Howrah* town cannot be proceeded with, so that those which had been marked out for improvement two years ago remain untouched. Busti improvement has also been stopped in the Suburbs of Calcutta, pro tem, pending its amalgamation with the Calcutta Municipality.

Medical Relief.—A new hospital for pilgrims was under construction in the Gya Municipality, at an estimated cost of Rs. 10,989-9-3. Baboo Akhoy Gobind Chowdry defrayed the cost for constructing a cholera hospital in the Pubna town, which will contain three rooms and a hall. The building has already been commenced, and when completed will supply a longfelt want. The Grish Chunder Hospital in the town of Kandi in Murshidabad

was approaching completion. Arrangements are being made in the *Bhagulpore* town for the erection of an asylum capable of accommodating 10 paupers and destitute aged persons. This is the first institution of the kind I have heard of in the mofussil.

Public Comfort.—Steps are being taken to provide a square or place of public resort for the people in the town of Bali in Howrah in the compounds of the Municipal Office and of the Rivers Thompson School lying contiguous to each other, and situated on the bank of the river and in the centre of the town. This is considered an excellent site, and will also form a play-ground for the boys of the school. Land in the vicinity is also to be acquired at an estimated cost of Rs. 7,500. The Government has consented to contribute Rs. 5,000 for the project.

Burial-grounds.—Land was provided in the Chittagong district for burial-grounds for villages—a measure which should be generally adopted to

obviate one great evil, at least, of village life.

Arboriculture.—Trees were planted on the roads in the towns of Durjiling and Kishnaghur and in the districts of Gya, Sarun, Sonthal Pergunnahs and Darjiling (Terai). A distinguishing feature in Gya was that the trees were chiefly fruit-bearing; and the trees in the Sonthal Pergunnahs were planted at the cost of Babu Aparava Krishna Mittra.

Port of Calcutta.—It will be evident from the following notices and observations that very extensive pollution of the Sanitary improvements and defects with regard to the flow of Sewage and Drainage into the River. river water prevails within the limits of the Port of Calcutta, and that a great deal remains to be The flushing inlet to No. 3 main drain at the done to obviate this evil. jetties has had its gradient altered, in order that the evils brought to notice in my Annual Report for 1885 might be remedied, but the success or otherwise of this alteration remains to be tested when there is a further fall in the river. From the flushing inlet of No. 4 main sewer at Nimtollah ghât, there was not only an excessive emanation of offensive gases, but also an overflow of sewage into the river. The Health Officer has suggested a mode of ventilation, and the Engineer of the Calcutta Corporation proposes to alter the gradient of the sewer. I believe, however, that the only way to get rid of the nuisance from the open ends of these sewers is to have every one of them flushed effectually and regularly by water raised from the river. The question of the drainage of Fort William escaping into the river again attracted attention during the year, and formed the subject of a correspondence between Government and this office. I trust that the Government of India has made, or will soon make arrangements for effectually stopping this nuisance. It was noticed again that the Howrah Municipality has for many years drained a large area of their town into the river, including the very offensive contents of the sewer of a large bazar. I have personally gone over the collecting area of the Howrah sewers at King's Road, and found that the complaint is a just one. I shall do my best to get the Howrah Municipality to mitigate the nuisance; but this will involve some changes in drainage, and is not a matter of easy solution.

168. The latrine in the Port Commissioners' dock at Howrah is faulty in Public Latrines on the Forcehore of construction, so that the overflow from it escaped the River. In fact it is considered that all the latrines of the Commissioners on the foreshore of the river are defective in this respect; that none of them are large enough for the numbers who frequent them; and that more of such conveniences are required. The latrine at Watgunge, under the Suburban Municipality, was very offensive. In short, the state of the conservancy throughout Tolly's nullah and the khal running through the ex-King of Oude's premises is extremely defective. The authorities concerned in the matter were communicated with, but the result was almost negative. The Health Officer suggests the adoption of a plan of latrines, which I consider is efficient and sufted for the use of the natives, and I would moreover gladly see it largely brought into use in Calcutta, where there is a water-supply through pipes.

169. It appears that the Health Officer was obliged to bring to the notice of the Calcutta Corporation the defective nature of their water boats as modes of conveyance of filtered water to the shipping, and that the Commissioners had set aside his views in the matter on the score of expense. As they seem determined to

wait for some serious catastrophe to accentuate the Health Officer's opinion, it appears to me that some other than the present arrangement is indicated, and that the Port Commissioners should undertake this duty entirely, merely

purchasing the water from the Calcutta Corporation.

The number of dead bodies and carcasses found floating in the river Corpses and Carcasses floating in the and dealt with by the Water Police was larger than last year. This is a mode of pollution of the river The exercise of more water which seems capable of much abatement. vigilance on the part of the police of riparian towns on the Hughli river would certainly effect it. Some of these Municipalities keep domes for the purpose of burying bodies found on the river bank, but the enormous number-4,853—of carcasses which reached Calcutta, proves that this mode of disposing of dead animals must be a favourite one along the river.
171. Act III (B.C.) of 1884, the Bengal Municipal Act, was introduced

Miscellaneous Sanitary operations of the year.

Extension of Sanitary Laws.

during the year to the Sonamukhi town in Bankura, Jamui in Monghyr, Chagdah in Nuddea, and Netrokona in Mymonsing, and various parts or sections of this Enactment bearing on sanitation, particularly

Part VI, containing special regulations relating to privies, drains, excavations, obstructions and encroachment on roads, to buildings and blocks of huts, to sale of food, drink and drugs, to disposal of the dead, and to offensive and dangerous trades or occupations; Part IX, relating to the construction and cleansing of latrines; and Part X, containing rules for the regulation of markets, were introduced into many Municipalities in which they were not in force before. Byelaws, framed under the same law, were brought into operation in the towns of Madhubun and Shahibgunge.

The places to which the Compulsory Registration Act, IV (B.C.) of 1873, the Compulsory Vaccination Act, V (B.C.) of 1880, and the Act prohibiting the practice of inoculation, IV (B.C.) of 1865, were extended have been mentioned in paragraphs 7, 155 and 157 of this Report. The Bill to amend the Bengal Vaccination Act, V of 1880, alluded to in paragraph 245 of my Annual Report for 1885, was passed as Act II of 1887. The objects of this Enactment have been avalatined in paragraph 155 of this Barent

ment have been explained in paragraph 155 of this Report.

The Local Self-Government Act, III (B.C.) of 1885, was introduced during the year into all the districts in the Province excepting the districts in the Chota Nagpore Division, the districts of Darjiling and Sonthal Pergunnals and the Chittagong Hill Tracts. My views regarding the introduction into these districts of sections 87 to 91 of the Enactment relating to Sanitation, and sections 92 to 96 relating to Vaccination, will be found in the next Section of this Report dealing with "Para all Proceedings" The District and Local Boards appointed under the provisions of the Enactment will no doubt effect in Boards appointed under the provisions of the Enactment will no doubt effect, in association with this Department, much improvement in village sanitation and vaccination when they shall become charged with these duties.

The Bill relating to village watchmen, referred to in paragraph 245 of my

Annual Report for 1885, became law during the year.

A very important law (Act III (B.C.) of 1886) [commonly known as the Ghee Act, as the very general adulteration of ghee gave rise to the necessity of checking the evil legally], prohibiting the sale, under a penalty, of articles of food or drink which are not of the nature, substance or quality demanded by

the purchaser, was passed.

Act VI (I.C.) of 1856, providing for the voluntary registration of Births, Deaths and Marriages among persons to whom the provisions of the Indian Succession Act of 1865, of the Indian Christian Marriage Act of 1872, and of the Parsi Marrriage and Divorce Act of 1865, apply, and providing for the authentication and custody of registers of the events, so that the entries in those registers shall be admissible as evidence in law courts, was passed during the year. I shall again refer to this Enactment in the next Section of this Report.

The Bill for the amalgamation of certain parts of the Suburban Muni-

cipality with the Calcutta Municipality is yet under consideration.
172. From the reports received from the Inspectors of Emigration, Calcutta and Goalundo, which have been separately sub-

Sanitary condition of the Calcutta and Gcalundo Emigration Dopole

mitted to Government with my observations thereon, it appeared that there was less sickness and mortality

in the depots under their supervision than during the preceding year; that, in fact, the health status of the Calcutta depôts had steadily improved, and not a single death, excepting that of an infant born on the premises, occurred in the Goalundo depôts; and that all the arrangements under the heads of accommodation, food, water, medical assistance, vaccination, &c., were satisfactory. Dr. Chundra, Inspector of the Calcutta Depôts, suggested, for reasons furnished in his report, the desirability of placing the depôts for free labourers under the Protector of Emigrants and the Sanitary Commissioner. The special orders of Government were solicited to this proposition, which, however, I did not consider called for the interference of Government for reasons submitted by me.

Under the orders of Government, passed at the instance of the Army

Return showing the sanitary estimates of villages in association with mortality in them required by the Army Sanitary Commission.

Sanitary Commission, sanitary information under the heads of "drainage," "water," and "domestic cleaning" relating to each registering circle in the Province, together with the mortality from

the Province, together with the mortality from cholera, small-pox, fever and bowel-complaints in them, are to be published with the Annual Reports of this Department. The object of this measure is very important, viz., that the exact sanitary condition of each tract in the Province may be on record, so that if disease is found to prevail in it persistently or epidemically, its association with particular local insanitary conditions will be seen. The statement containing this information published this year, vide Appendix VI to this Report, is not quite complete or full, owing to some misapprehension on the part of the officers of the Vaccination Department, (who were requested to collect the local sanitary estimates of the villages, so that the sanitary status of the registering circles in which they the villages, so that the sanitary status of the registering circles in which they are situated, as a whole, may be arrived at, and be comparable with that of other and neighbouring circles) of what was required from them; and also owing to the impracticability of visiting all the villages in the Province in one year. Nevertheless, it will be seen by a glance at the statement in question that it contains much information on the points above mentioned. In the present state of registration of deaths, however, care must be taken not to accept what is given as correct in the way English statistics are accepted, otherwise sanitary efforts based on them may be very much misdirected and money uselessly spent. Over great areas they give information which may money uselessly spent. Over great areas they give information which may generally indicate their health status, but the more these areas are subdivided, errors are apt to be magnified.

Under the same orders, the Civil Surgeons of the large Municipalities were requested to keep up and furnish a table of Cholera prevalence in association with Meteorological conditions called for by the same authority the daily deaths from cholera and the daily meteorfor by the same authority ological conditions during the prevalence of the disease in epidemic form in their towns, in consonance with the views of the Army Sanitary Commission that if such records were kept regularly at several

of the larger population groups, important information might in time be obtained. I have explained in paragraph 36 of this Report why a full record in this direc-

tion could not be submitted this year.

A case having occurred in which compensation was claimed for the destruction of the bedding, clothing, &c., belonging Rules for purification of bedding and clothing on Cholcra outbreaks. and clothing on Cholora outbreaks. to certain individuals who occupied quarters in which a man had died of cholera, the Government of India considered it desirable that, in order to prevent the unnecessary destruction of property and the submission of claims for compensation, some definite rules on the subject should be laid down, and accordingly directed that the following rules, prescribed for adoption among European troops, should in future be carefully observed in dealing with such bedding, clothing, &c. These rules were circulated to the Deputy Sanitary Commissioners for information and guidance:-

Purification of bedding and clothing .- "The straw of the barrack bedding used by persons attacked prior to admission into hospital will be burnt. stuffing of mattresses and pillows used by cholera patients in hospital will be opened out, exposed to the air, and beaten, and, when practicable, submitted to a dry heat of not less than 250° Farenheit for at least an hour (in an oven or otherwise*) before being used again; the remainder of the barrack and

^{*} Or if means are not at hand to enable this to be done, it should be boiled.

hospital bedding, clothing, &c., and such of the clothing worn by patients on their admission as is not liable to injury thereby, shall be boiled exposed to the air. heaten, and afterwards washed with soap and water.

"Cots and punkah fringes which have been used by cholera patients, or in wards set apart for them, should also be subjected to the action of boiling water

when they are no longer required for such cases.

"Such articles of a soldier's kit as cannot be treated in the above manner will be removed to hospital, and there fumigated and exposed to the air and sun for a week, beaten and brushed.

"Burning only to be resorted to when purification cannot be at once

carried out.

"When circumstances are such that the above processes of purification cannot be at once carried out, such articles as body linen, bedding, cots and punkah fringes may be burnt, but with proper arrangements the necessity for

this destruction will rarely arise."

176. The Officiating Magistrate of Tipperah proposes to create a fund of Rs. 16,000 a year by, I think, imposing a tax Sanitation promoted by District Officers and Others. on marriages, to be expended in providing good drinking water, in the first place, in the thanas in the district which suffer from cholera. This is a very laudable undertaking. The large embankment drawn across a valley at Sharipara in the Dumka-Ramporehat road, in the Sonthal Pergunnahs, to store water and to improve the gradient of the road, referred to in a preceding paragraph of this section, was the work of Mr. Forbes, a former Deputy Commissioner. It also appears that special attention was paid to forest conservancy in the Damun-i-koh to promote a continued supply of water and timber by the local residents, particularly Messrs. Smith and Grant, notwithstanding that some trouble is experienced in checking the destruction of timber for want of watchers. Mr. Carstairs, the Deputy Commissioner, who reported the above facts, observes, with reference to them, that "the question of roads is very closely joined to that of water. No doubt, where the country is well timbered, the moisture is retained in the soil and comes out at the foot of the hills in the shape of springs. The want of water is very keenly felt in many places, even for drinking purposes, when the yearly supply is short. Not drainage, but storage is what we have to care for, both artificially by drains and tanks, and naturally by promoting vegetation on hills and slopes." It may not be out of place to mention here that Assistant Surgeon Umesh Chundra Ghose, Deputy Superintendent of Vaccination, 1st Metropolitan Circle, on his visit to the Bussirhat Municipality in the 24 Pergunnahs district during the time who cholera was prevailing there, advised the Municipal Commissioners to arrange for the burying of the cholera vomit and excreta, for burning the soiled clothes, and disinfecting and washing the other clothing of the attacked immediately after death, for using sulphur fumigation, and for the performance of "sankertan" (religious processions with hymns in honour of the god Hori or Krishna) to obviate depression of spirits.

177. The achievement of very satisfactory success in grappling with the many and complicated insanitary conditions which are prevalent in both the towns and districts of Bengal is a question of great difficulty, but that real advance, although small when placed side by side with what is needed, is being steadily made, is beyond question, and I indulge the hope that the foregoing sketch of what has been done for the improvement of sanitation this year will satisfy Government that the subject has received general attention within the bounds of practicability during a single year, bearing in mind that the funds at command for the

purpose are altogether incommensurate with the demands made on them.

SECTION X.

PERSONAL PROCEEDINGS.

Proceedings of the Sanitary Commissioner for Bengal.

178. I was in charge of the Office throughout

Officer in charge of the Office during the year. the year.

> During this period I inspected the 38 Municipalities indicated in the 179.

Places inspected by the Sanitary Commissioner.

In January. Burdwan. Buri. Berhampur. City Murshidabad. English Bazar. Shahebgunge. Old Maldah. Purneah. Bhagulpore. Monghyr. Jamalpur. Patna. Gya. Arrah. Chupra Mozufferpore.

In February.

Motihari. Durbhanga. Chittagong.

In May.

Darjiling.

In June. Darjiling.

In August.

Naraingunge. Daces. Nassirabad. Comillah.

In November.

Jalpaiguri. Dinajpur. Rungpur. Bogra. Beauleah. Pubna. Jessore. Khulna. Barisal.

In December.

Howrah. Kishnaghur. Serampore. Midnapore.

margin, against 27 during the preceding and carefully and exhaustively enquired into their sanitary condition in company, in most cases, with one or more of the local Officers—Chairmen and Commissioners—and attended by the subordinate sanitary staff of the towns to whom careful instructions were given. My observations, with suggestions for the rectification of the defects I found in existence, were forwarded, through the Magistrate, to the Commissioners of each Municipality for such action as was called An abstract sketch of the sanitary condition of the towns visited, the defects in them which needed attention, and the action taken on my suggestions, is presented in Appendix V to this Report. An examination of this Appendix will show that while sanitary defects—some of a grave character—obtain, to a more or less extent, in all the towns inspected,

those whose condition need be noticed here occupy the position in sanitary The asterisks placed opposite the names of estimate assigned to them below. some of the towns indicate that their condition is extremely bad:-

Towns found in fairly good condition,	Towns found in bad condition.		improven	ch aubstantial ents were sled.	Towns in whi ment, or ha provemen	Towns which had retro- graded in sanitary status.	
Burdwan, Darjiling, Shahebgunge,	Suri. Enclish Bazar.* Old Maldah.* Purneah. Jamalpur. Gya.* Mozufferpore.* Bottish.* Durbhanga.*	Howrah. Chittagong. Dacca. Comillah. Dinajpur. Bogra. Rungpur. Boauleah. Serampore.	Burdwan. Berhampur. Murshidabad. Shahebgunge. Purneah. Bhagulpore. Jamalpur, Arrah. Chupra.	Motihari. Darjijing. Naraingunge. Jalpaiguri. Runggur. Pubna: Barisal. Kishnaghur. Midnapore.	Old Maldah. Bettiah. Chittagong.	Dinajpur. Howrah. Khulna. Serampore.	Patna. Mozufferpore.

The sanitary administration of the Mozufferpore, Durbhanga, English Bazar, Old Maldah and Monghyr towns was altogether unsatisfactory, and their Commissioners were quite indifferent to their sanitary interests, and in these, excluding Monghyr and including Bettiah, Chittagong and Howrah, the arrangements under many heads of sanitation were bad,—some gravely so. The insanitary conditions obtaining in the Chittagong town have formed the subject of complaint for years. In Comillah intramural interment was found to prevail to a considerable extent. In the same town my suggestions to bury night-soil in shallow trenches and to reserve tanks for drinking purposes alone were negatived—the former because the soil was damp and the rains frequent, and the latter because there were no good tanks available in the localities where reserved tanks were necessary; but the Commissioners have since been In the Mozufferpore town the night-soil is induced to reconsider matters.

never removed from private latrines, or it is done at long intervals, and the Commissioners fail to recognise that such a state of matters is injurious to health or at all objectionable. They also objected to introduce into the town Part IX of the Bengal Municipal Act, relating to the cleansing of latrines, on the ground of hardship to the rate-payers. But the real objection throughout Behar is to have to pay for the removal of night-soil which is quite a new idea. To spend money on such an object is quite beyond the understanding of the average Behar Commissioner, who looks to natural forces to rid him of such matters. In the Monghyr town my recommendation to keep drains always clean was set aside and periodical cleansing adhered to. The Magistrate very properly condemns this action, and thinks that the Commissioners fail to understand their duty in this respect; and, with regard to my suggestion to gradually extend drainage, the same officer remarks that the Commissioners appear "persistently to evade doing what was suggested." Again, my request to extend Part IX of the Act was met by the answer of the Commissioners that the question of withdrawing this law (which had been brought into operation in certain parts of the town on their own recommendation) had been submitted to Government. The Magistrate rightly considers this a very retrograde step, and is of opinion that if any alteration is to be made, it should consist of the extension of the measure to the whole town. moreover reports that he has drawn attention to great defects in the sanitary administration of this town, but has hitherto been disappointed with the results, though some improvements have certainly been effected. In the English Bazar town the same measure cannot be brought into operation, because, it is said, several inconveniences are likely to accrue, and that it is difficult to secure the services of an adequate number of mehters. The Bhagulpore Commissioners negatived the suggestion to have the clothes, pillows, &c., of the dead burned along with the corpse, on the ground that the Hindus have religious objections to this process. If the objection is to burn along with the body, they could have arranged to have them burned or buried elsewhere. In Old Maldah town filth is never removed from the private privies, but is left to be washed away by the rains, and the Commissioners appear to be content with this arrangement. The Civil Surgeon of Durbhanga brings to notice that the town was suffering very much from the want of a proper Vice-Chairman, everything being left to an incompetent overseer at a time when the town was flooded by the overflow of the Bhagiruthi and Kumla rivers, and he comments severely on the apathy, listlessness, and utter want of interest evinced by the Municipal Commissioners in the sanitary welfare of the town. He reports that they had not give consideration to the suggestions for improvement made in my Inspection Report; he regrets that so little power or authority is given to him in the matter as a representative of the Sanitary Commissioner; and he asks whether Government could not lay down a rule directing that certain percentages of Municipal Income should be spent yearly on the most urgent sanitary requirements, such as water-supply, drainage, &c.

180. In my capacity of Professor of Hygiene in the Medical College,

Lecture on Hygiene delivered at the Medical College.

I delivered 20 lectures on the subject to 40 students in July and August, and also had the usual

test and honor examination.

181. A brief resumé of the reports which I submitted to Government

Reports submitted to Government during the year, in compliance with orders on the subject, is subjoined.

182. As stated in a previous part of this Report, the Local Self-Govern-

Report on the duties of the Boards appointed under the Local Self-Government Act with regard to sections 87 to 91, relating to Sanitation, and 92 to 96, relating to Vaccination.

ment Act was brought into operation during the year into all the districts, excepting a few, in Bengal. The benefits to sanitation derivable from the measure, and certain matters relating to Sanitary Inspectors and Inspectors of Vaccination, have been

described on page 157 of my Annual Report for 1884. During the year under report I was requested in orders No. 1841TM, dated the 1st July; to submit my opinion as to the advisability of extending the provisions of sections 87 to 91, relating to Sanitation, and sections 92 to 96, relating to Vaccination, of the Enactment, to the districts into which it had been introduced; and that, if I should be of opinion that the sections dealing with Sanitation should be extended,

I should nake precise and definite proposals in the matter, stating clearly what work would wish each district to undertake, what establishment would be required, what expenditure would be involved, and how it might best be met. In reply, I submitted the following suggestions:—

(1) That the sanitary sections should be extended at once and expenditure provided for the purpose. (2) That if the sanitary sections are introduced, those relating to Vaccination ought also to be brought into operation, as, if this were not done, two establishments would have to be provided—one under Government for vaccination, and the other under the District Boards for sanitary work only. (3) That a Rural Compulsory Vaccination Act, to be worked by the District Boards, should be passed with a view to complete protection of the country, as Act V of 1880 is only suitable for towns. (4) That the duties to be undertaken by the District Boards under the sections relating to Sanitation should consist of—(a) the provision and maintenance of drainage, but not the preparation of large schemes which should be carried out by Government; (b) to keep open and improve present drainage channels; (c) to attend to village drainage, and see that waterway is afforded through village roads, embankments, entrances to houses, &c.; (d) to remedy obstructions to drainage connected with district roads; (e) to erect embankments with sluice-gates, &c., for protection from floods; (f) to carry out the duties laid down in sections 88 to 90 of the Act with regard to watersupply, and to assist the people in improving their tanks; (g) if the control of tanks is vested in them, to see to their proper conservancy, and to lay down instructions with regard to the ones to be devoted to drinking water supply alone, gradually providing one or more of such tanks for every village; (h) to attend to the sinking of deep wells, and to provide the necessary plant for raising water from them, or by means of tubular wells; (i) to prevent the casting into streams, lakes, &c., corpses and carcasses, the steeping of jute indiscriminately, and the different plans of fishing calculated to foul the water and render it unfit for drinking; (j) to provide burying and burning-grounds, and to provide proper lands for extramural interments of Mahomedan and other dead, and, after doing so, to absolutely stop the general practice of burying inside villages and even in houses; (k) in providing proper burning-grounds for Hindus, to arrange for the conservancy of certain village lands in jungle for the cheap and convenient supply of firewood; (1) to cause the Sanitary Inspectors to inspect food supplies exposed for sale in bazars and large marts and the shops of medicine vendors, who should be required to keep a register of poisons, bought and sold; (m) to look after the conservancy arrangements of villages, utilising the services of a resident low caste Hari) for the cleaning of villages, and especially for the removal of cow-dung and house-refuse beyond village limits, and their proper preservation for use as manure; (n) to see that owners of unoccupied lands do not allow or let them run to waste and get covered with jungle; (0) to prevent the erection or use of privies in places where sweepers are not available for cleaning them; and (p) to afford to the Deputy Sanitary Commissioners Sanitary Reports. (5) Vaccination.—That the Boards should control, through their Inspectors, the vaccination operations in their several jurisdictions, and afford the usual statistics to this Office through the Deputy Sanitary Commissioners; and (6) Establishment.—That each District Board should appoint a local Sanitary Inspector, who would be ex-officio Superintendent of Vaccination, and perform the duties assigned to the Superintendent of Vaccination, under the Bengal Vaccination Act of 1880, the Deputy Superintendents of Vaccination being dispensed with; and that under the Sanitary Inspector a Sub-Inspector should be appointed for each Local Board.

I also submitted the following observations bearing on the appointment of Sanitary Inspectors and Sub-Inspectors. The Sanitary Inspectors would require to be men of education and training, and would probably have to be taken from the Assistant Surgeon class, with pay from Rs. 100 to Rs. 200 a month rising by regular increments. Many of the present Deputy Superintendents of Vaccination who have been trained to the work might be usefully lent to the Boards. Civil Hospital Assistants who have been trained in the different Medical Colleges of the Province might at times be appointed, if Assistant Surgeons were not available. They would, however, require to be

The Sub-Inspectors would be the present Inspectors of licensed vaccinators, men well acquainted with the localities where they are employed, who might be transferred to the service of the Local Boards from Government Civil Hospital Assistants might also be employed in this grade with chance of promotion to Inspector, if of proved ability and usefulness.

Under the orders of Government No. 3376, dated the 15th December 1886, I inspected the North Barrackpore Municipal-Report on inspection of Garulia ity to enquire into its sanitary condition, with special reference to the insanitary state of village Garulia

brought to notice by Messrs. Schoene, Kilburn & Co., Secretaries to the A brief record of the results of this inspection Dunbar Cotton Mills Company.

will be found on page 21, paragraph 45 of this Report.

During the year a proposal was made by the Military authorities to resume possession, for an artillery range, of the land Report on proposal by the Military authorities to resume possession of certain lands in Darjiling. in Darjiling which they thought was comprised within the boundaries of the old Cantonment at Senchal, and which includes the Rungbool forest reserve, in which are situated the Senchal springs. My opinion having been asked on the question, I submitted that as it was essential that a sufficient and pure supply of water should be preserved for the people in the sanitarium of Darjiling, and for the troops when located in the future Cantonment at Lebong, and that as their health interests, which are also those of the Province, should be carefully safeguarded, none of the existing forest reserve in the Rungbool block should, as proposed, be made over to the Military authorities, but that so much as may be required for their purpose be given from the Senchal block in the north-eastern face of the hill.

During the year I was consulted by Government as to the expediency of assigning to the Sanitary Commissioner the duties of Registrar-General of Births, Deaths and Report on the appointment of Registrar General of Births, Deaths and Marriages under Act VI of 1886. Marriages under Act VI of 1886. In my reply No. 4433, dated the 6th August 1886, I stated that it would not be practicable, for the reasons therein given, for the Sanitary Commissioner to discharge the duties in question in such a manner as to fulfil the objects of the Act; but I submitted forms of the Registers of births and deaths which might be used for the purpose.

186. No opportunity offered in this Department during the year under review to give employment to Mahomedans as Employment of Mahomedans in suggested in the orders of Government contained in The principle therein enunciated is however \mathbf{C} dated the 7th April 1886. recognized, and will not be lost sight of should an opportunity present itself for the purpose. In the Vaccination branch of this Department, however, there are at present one Mahomedan employed as Deputy Superintendent of Vaccination, 13 as Inspectors of Vaccination, four as Head Vaccinators, and 26 as

Vaccinators, exclusive of a large body (at present 262) of licensed vaccinators, whose number fluctuates from year to year.

During the year I received copies of papers for information in Advisability of bringing Municipal and Aided Schools under sanitary inspection. which the Sanitary Commissioner for Madras raised the question as to the advisability of bringing Municipal and Aided Schools under systematic sanitary inspections in respect to their sites, construction and size of schoolrooms, furniture, latrines and play-grounds, and the amount of study and exercise for the pupils. I was not asked for an opinion in the matter, but I consider that the hygiene of these and similar institutions needs the attention of the Sanitary Department, as a case somewhat similar cropped up during the year in which I was asked by the Chief Superintendent of Telegraphs, Bengal, to depute an officer to inspect the Central Telegraph Office, the sanitary arrangements obtaining in it having been pronounced to be very unsatisfactory.

Dr. Lynch was in charge of the office of the Health Officer of the Port of Calcutta from the beginning of the year to the 27th of June, and on the last day of the Proceedings of the Health Officer of the Port of Calcutta. year. During the interval he was on leave, and

Officer in charge, Dr. Vincent Richards officiated for him. 189. The marginal table exhibits the number and classes of the vessels

	d-bound.	Outward-boun		
1886.	1885.	1886.	1885.	
			•	
. 660	6 46	660	551.	
. 52	134	144	75	
805	887	404	239	
. 407	893	400	387	
	***************************************	-		
			15,832	
11,270	16,890	17,230	10,134	
29.930	85,879	87,521	25,466	
	1886. 660 62 . 805 . 407 . 18,660 . 11,270	. 660 646 . 52 134 . 305 387 . 407 393 . 18,660 18,989 . 11,270 16,890	1886, 1885, 1886, . 660 646 660 . 52 134 144 . 305 387 404 . 407 893 400 . 18,660 18,989 20,291 . 11,270 16,890 17,230	

Impoction of Vessels.

which were inspected, and the crew-European and Native-which they contained, in comparison with similar information for The comparison indithe preceding year. cates that 712 vessels were visited on arrival, against 700 in 1885, and 804 against 626 on departure, showing a decrease of 68 in the number of the former, and an increase of 178 in that of the latter. yearly differences in the number of inwardbound vessels inspected are controlled mainly by the circumstance that it is not necessary to inspect coasting vessels,

which make frequent voyages to and from Calcutta, at each return visit. great increase in the inspections of outward-bound vessels was brought about by the new system of granting the Bills-of-Health prescribed by the Government, which came into effect in September 1885 and was at work throughout this year. From a review of the work of the year, I have no hesitation in stating that the manner in which Dr. Richards carried out his duties merits commendation, and that Dr. Lynch also, under great difficulties in moving about the river, which finally scriously injured his health, conducted his duties in the careful, painstaking way he has always done.

This officer is reported to have afforded satisfaction. He inspected

Proceedings of the Native Inspector of the Port of Calcutta.

12,595 boats and visited the latrines 479 times, and found 457 of the former and one of the latter in a filthy condition; made 470 complaints to the

Police; traced 140 cases of sickness on board of boats, and inspected 136 Police * water-boats.

Proceedings of the Officers of the Vaccination Department in connection with their sanitary duties.

Work of the Sanitary Commissioner for Bengal.

In Section VII, paragraph 137 of this Report, I have furnished particulars of the action taken by me in connection with the interests of Vaccination, and in paragraphs 179 to 187 of this Section, I have shown what has been done by me in the performance of my sanitary duties generally. Notices of work done in this

direction will also be found interspersed in the portions of this Report preceding this Section. I now propose to submit an account of my proceedings in relation to the promotion of sanitary inspections and work by my subordinates in the Vaccination Department.

The following works were performed this year.

Darjiling, Behar, mans, Dacca, and Metropolitan, Sonthal Pergunnahs, Eastern Bengal Circles.

I personally conferred with the Deputy Sanitary Commissioners of the Circles named in the margin, questioned them as to the Sanitary Inspections made by them, and gave them to understand what was required from

them in this direction.

I carefully perused the monthly Diaries of Sanitary Inspections received from the Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination, some of them being exhaustive ones. These diaries, 192 in number, furnished reports of the sanitary conditions obtaining in 94 minor towns and 5,804 villages. After reading them, I, in the first place, pointed out to the Officers abovenamed the omissions they had made of such points in the sanitary history of the localities inspected as were required by the rules on the subject or were necessary, the omissions they had made, or irregularities they had committed in testing the registration of Births and Deaths in the same localities, the want of care in preparing, or the submission of superfluous circumstantial details in, the Diaries, &c. I then had extracts from these diaries made showing the important insanitary conditions obtaining in the towns and villages reported on, and forwarded them, with my observations, to the local officers concerned for such action as appeared to be called

A very large number of death verification statements from no less than about 32,417 villages and towns were received, not only from the abovenamed officers in their diaries, but also from 108 Inspectors of Vaccination, Head Vaccinators and officers of the same class. I examined these and forwarded

such of them (a large number) as showed that deaths occurring in viriages had not been entered in the thana registers, to the Magistrates when the events occurred in rural areas, and to the Chairmen of towns when they occurred in urban areas. I should mention that this procedure entailed heavy correspondence before the cases were brought to final issue..

The earnest attention of the Deputy Sanitary Commissioners and of their subordinates having been requested to the orders of Government, No. 3287 of the 10th December 1886, intimating that the Government of India attached great importance to the performance by them of sanitary inspection work, I maintained a sustained check against retrogression in this direction.

Work of the Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination.

Number of villages inspected for sanitary purposes.

	BY THE DEPUTY SANITARY COMMISSIONERS.					BY	BY THE DEPUTY SUPERINTENDENTS OF VACCINATION.					
Cincles.		Number of T Villages ins						ber of ers in-		Number of Towns and Villages inspected in		
		0	1884€7.		•	1885-86.	Number Officers			1886-87. 1883		1885-86.
	1886-57.	1855-86.	Towns.	Villages.	Total.	Villages.	1888-87.	1885-86.	Towns.	Villages.	Total,	Villages.
Metropolitan Suburbs of Calcutta Darjiling Ranchi Sonthal Pergunnahs Eastern Bengal Orissa Behar	1 1 1 1 1	1 1 1 1 1	15 9 4 3 1	78 772 783 783 210 595	536 - 82 7×1 787 213 596 336	395 200 281 345 64 1,155	ation 1 No Do ation	i 1 sputy ! i. oputy	36 1 1 Superi 8 Superir Superir	216 145 intende 342 itende	350 nt of	2,155
TOTAL	7	7	44	3,257	3,341	2,880	9	9	51	2,517	2,568	2,918

192. These officers inspected, for sanitary purposes, the numbers of towns and villages given in the marginal table. These figures indicate that 3,331 inspections, against 2,880 in the preceding year, were undertaken by the Deputy Sanitary Commiss i on ers, and 2,568 against 2,918 by the Deputy Superintendents Vaccination, showing that there was an increase of 451 inspections on the part of the former class of officers, notwithstand-

ing the large individual failings hereinafter mentioned, and a diminution of 350 inspections on the part of the latter, the greatest burden of the falling off being borne by the Deputy Superintendents of the Metropolitan Circles. however, the decrement against the increment, the work of the year, it will be seen, culminated in an increase of 101 inspections. The circles, relatively considered, show that the largest number of sanitary inspections were made by the Deputy Sanitary Commissioners of the Sonthal Pergunnahs, Ranchi, Orissa, and Metropolitan Circles, in the order named, and by the Deputy Superintendents of Vaccination, Metropolic a Coreles (whose average inspections, individual merit being eliminated, amounted to 462 each), and the Deputy Superintendent of Vaccination, Eastern Bengal Circle; the rest returning inferior numbers, notably the Deputy Sanitary Commissioner of the Darjiling Circle. Contrasted with the inspections of the preceding year, improvement is seen on the side of the Deputy Sanitary Commissioners of the Rauchi, Sonthal Pergunnahs, Eastern Bengal, and Metropolitan Circles, in the order given, the officers of the two first-named circles having more than doubled their inspections, and of the Deputy Superintendents of Vaccination, Ranchi and Darjiling Circles; while retrogression occurred on the side of the Deputy Sanitary Commissioners of the Orissa, Darjiling, and Behar Circles, the falling off in Orissa being very considerable, and of the Deputy Superintendents of Vaccination of the Metropolitan and Eastern Bengal Circles. On the whole, however, I hold to the opinion that a very fair number of villages was inspected during the year under notice for sanitary purposes, particularly by the Deputy Sanitary Commissioners. This mode of appraising the performance of sanitary duty is not one to be entirely relied on. The quality of the work done cannot be numerically shown or the amount of labour incurred. It is easy to run into large figures when the villages are very small, as in Orissa and the Sonthal Pergunnahs.

193. Report on the Health Condition of the Villages, &c., inspected by the Offi-cers of the Vaccination Department; advice tendered, and recommendations made by them for rectifying Sanitary

Summaries of the reports on the health condition, &c., of the towns and villages which were inspected during the year. received from the Deputy Sanitary Commissioners and Deputy Superintendents of Vaccination, are submitted in the following pages. In my Annual Reports of former years these summaries were furnished in a very condensed form in order to obviate expansion of the Reports; but having in view the opinion expressed by the Government of India on the sanitary work performed by the officers abovementioned, I deem it my duty, in justice to them, to expose as fully as possible what they have accomplished this year. Still, however, I have limited this exposition to those points which bear directly on the sanitation of the localities inspected, omitting much that has been said regarding topography, number and religion of the people, the trades or occupations followed by them, food-supply, &c., where they did not appear to have affected health. I submit that a mine of sanitary information has been afforded in the reports, which is of great importance and value in the interests of sanitation, and well calculated to improve the sanitary status of the localities to which they relate, if only the Government will give effect to the suggestions made.

194.	METRO.	POLITAN	CIRCL	$\pmb{\it ESDr}$
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No	ddad	. Dist		-	Bharatpore Assanpore	•••	•••	3
Kalupol Damurhudd		***		3 5		Cotal		77
Bholuka Kumerkhali Kustia	•••	•••		6 9 4	<i>Birbhu</i> : Soori Rampurhat			23
Hanskhali Chagdah Kaligunge	•••		·	6 8	Bolpur Moureswar Dubrajporo Nulhati	•••	•••	3 5 5 23
_		otal		47		otal	···	68
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Doomjor	<i>::</i> "	 Potal	•••	14	Chandrakon	Total		108

-Dr. Kali Pada Gupta, Deputy Sanitary Commissioner.—This officer returned from deputation duty and rejoined his appointment on the 25th November 1886. Moreover, most of his time since joining was occupied in supervising vaccine operations in rural villages. His sanitary inspections have not, consequently, been so full as it would otherwise have been. Nevertheless, he inspected, for sanitary purposes, 13 towns and 514 villages situated in the thanas in the districts named in the margin. The subjoined facts, which are of much value, have been taken from bis report. Dr. Gupta's inspections, Dr. ffrench-Mullen, who officiated for him up to the 7th July, inspected five towns; Assistant Surgeon Jadub Chunder Ghose, Rai Bahadur, who succeeded Dr. ffrench-Mullen in the officiating appointment, inspected up to the 24th November one town and seven villages.

195. The districts of Bankura, Birbhum and Burdwan (west) are elevated, dry, and the soil is laterite or clay, stony or carboniferous. The country is undulating, and the drainage free. Villages and Dwellings.—The villages are compact, open and airy, with a few trees, and, climinating parts of Bankura, there is no jungle

worth the name. The houses are dark and not well ventilated. Drainage.—The paths act as drains for rain-water. Conservancy.—Manure pits and heaps are found more or less in all villages. Defeccation is carried on in fields and jungles and on the road and tank sides. Water-supply is taken from tanks and wells, and from rivers in villages situated on the banks of current rivers. The quality of the water is not good, nor is the quantity always sufficient, the tanks having become silted up and choked with weeds. Roads.—Bankura and Birbhum possess good roads metalled with laterite or kunkur, which is locally procurable. Most of them have no trees for shade. Young plants have, however, been lately planted on them, but more are required. Jute-steeping.—No jute is grown in these districts. General health.—Malarious fever prevailed largely in all the three districts a few years ago. It has abated very considerably, though cases were noticed. Cholera was bad in November and December in some parts, though comparatively less than in the neighbouring districts. Burdwan, East, and

Hughli.—These districts are situated on lower ground, and are not so dry as The country is more flat, and the drainage not so free. West Burdwan. Dwellings.—The villages consist chiefly of mud houses and huts built in rows, and crowded together. Roads.—There are no roads in the villages. The Grand Trunk Road passes through these districts, and there is a metalled road from Burdwan to Katwa and from Mymari to Chuckdighi, and kutcha ones from Burdwan to Kalna and from Hughli to Dhaniakhali, and thence to Boinchee. Shade is afforded by trees. Water-supply is taken from tanks and rivers. Of the rivers, the Bhagiruthi and Damuda are current, but the Saraswati, Kunti and Kana nuddees are stagnant for the greater part of the The tanks have silted up and are choked with weeds, and they are not now flushed and their water renewed by the Damuda floods, owing to the embankment. The water-supply is bad in quality and insufficient in quantity in many parts. Conservancy is very bad. The road and tank sides, as well as waste lands surrounding houses, are resorted to for defectation. Jute-steeping.— Some jute and flax are grown in Hughli, and steeped in ponds and excava-General health.—Malarious fever of a severe type prevailed for several years and devasted the country and depopulated many villages in these dis-Cholera occurs sporadically. Small-pox is rarely heard of. In this connection the drainage of the Dankuni bhils should be mentioned as a great improvement and amelioration of the sources of malaria. Howrah.—This is a small district of two sub-divisions full of bhils and jullahs, low and flat, and much submerged during the rains. Drainage is not free. Dwellings.—The villages consist chiefly of compact mud houses, very thickly surrounded with trees and bamboo clumps, and intersected by narrow and raised pathways. Water-supply is obtained from tanks and the rivers Hughli, Damuda, and from some khals. The quality of the water is fair and the quantity abundant. Conservancy is most objectionable, the road and tank sides being thickly covered with human excreta. Jute.—Some jute and flax are grown and steeped in pends and holes. General health was fair. There was not much ague, but frequent outbreaks of cholera. Midnapore.—This is a large district with an extensive seaboard, and is elevated, being the continuation of the Chota Nagpore plateau. The soil is laterite, and the north and west parts are covered with forests of sâl and other trees, and are very sparsely populated. Dwellings consist chiefly of mud houses, but not crowded, and fairly shaded by trees. There are no roads in the villages. Water-supply is taken from tanks and rivers; the former have silted up and are choked with weeds; the latter are the Suburnorekha, Cossye, Seelye, and Roopnarain, the water which is award and Huldi and Rossyelpore with brackish and madriple of which is sweet, and Huldi and Russoolpore with brackish and undrinkable water. The embankments which protect the country from inundation prevent the flushing and renovation of the tanks with fresh spring water from the Ramghur hills, the sources of the Cossye and Seelye. Conservancy is very bad, the road and tank sides and waste lands around dwellings being freely resorted to for defeccation. General health.—Ague is considered to have invaded the northern half of the district from the direction of Ghattal and Chandrakona, which formerly formed parts of malarious Hughli; but the southern sub-divisions of Tumluk and Contai, which border on the sea, are free from this malady, though cholera and small-pox are found in them, the latter with greatly abated severity. Nuddea.—Villages and Dwellings.—The villages are more open and free from jungle as a rule. The houses are constructed of mud walls with straw roofs in the south, and of mat walls in the north for fear of floods. The village sites are low in the south, but elevated The soil consists of sand mixed with clay. Water-supply is taken principally from tanks and wells, except in places in proximity to current rivers, such as the Bhyrub, Bhagiruthi, Jellinghee and Matabhanga, and to On the whole, water is scarce. Conservancy is objectionable. The fields are resorted to for defeccation. It is said that the villages are clean and free of manure heaps and pits; but this does not accord with my own observations. Roads.—There are no village roads. The Eastern Bengal State Railway passes through from south to north. Jute-steeping.—Some jute and flax are grown. General health.—Cholora was more or less present in November and December, and ague, which was very prevalent in 1883-84, disappeared after the floods of 1885 "like magic," showing the good effects of inundation

which waskes away all filth, and fills up the dighis (tanks) and ponds with fresh water. No small-pox or any other zymotic disease was prevalent. Jessore.—Villages and Dwellings.—The villages are very shady, but full of jungle. The houses are built on raised mud floors, and consist of mat walls with straw roofs. Some of them wear a very picturesque appearance with painted split bamboo artistically arranged. In the southern part each house has a large garden of fruit trees, such as areca nut, coccanut, &c. Water-supply is scarce and difficult to obtain in places away from rivers and bhils, and wells are dug in such places. The water of the Bhyrub is stagnant, and is dreaded by the people as apt to cause fever; but they freely bathe in it. The water of the rivers Nobogunga, Kumar, Chitra, and Modhumoti is good. Conservancy is bad. Defectation is carried on in fields and jungle and on the banks of current rivers. Roads.—The village roads consist of paths; the public roads require to be planted with more trees for shade. Jute-steeping.—Some jute and flax are grown, and consequently steeped. General health.—Jessore has always had a bad name. The district abounds in marshes, bhils, rivers and khals, which account for its being aguish. Cholcra was more or less present in November and December. Khulna.—The Dwellings are situated on the banks of rivers and khals, and consist of mat walls and thatched roofs, some being pretty and picturesque. Each house has a garden attached to it of fruit trees, and this makes the villages very shady and dark, and interferes with ventilation. supply is taken from rivers and khals where the water in them is not brackish, otherwise from tanks and wells; but all rivers and khals contain brackish water to a more or less extent. Conservancy is bad, as defectation is carried on in jungles and on roadsides and banks of khals and rivers. General health.—Cholera prevails periodically, and ague in some parts. 24-Pergunnahs.—This is a large district, and extends from the sea to the south of Bagirkhal in the north and from the Hughli (west) to the Koppoducko river (east). The southern and eastern parts are Sunderbuns, or low alluvial lands, abounding in a network of vivors and khals partitioned into lots for rice cultivation. The north and middle portions are more settled, and contain some of the largest and most densely populated villages. The villages are very jungly and badly drained, with numerous ponds and tanks containing moderately good water. Conservancy is very bad, the road and tank sides being contaminated. Jute is grown in the district. Murshidabad.—This district is comparatively dry and less jungly and feverish, but Berhampore and its neighbourhood are distinctly The rivers Bhagiruthi and Bhyrub flow through it, and the Jellinghi forms its eastern boundary. The Villages are situated on low ground, and those near the rivers are flooded annually. The soil is sandy and clayey. There are few trees and no roads. Good drinking water is scarce in places away from rivers, and here tanks and wells form the source of the water-supply.

GENERAL OBSERVATIONS.—Personal and domestic habits of the people.—The Hindus, with the exception of the lowest castes, are cleanly in They rise betimes, smoke tobacco which helps the bowels to act, go out with a lota or garoo in hand and defeecate in the nearest convenient spot and then return, brush their teeth with twigs and bathe, as a good Hindu never eats without making his daily ablution. They are very scrupulous in keeping the interior of their houses and rooms clean, though cesspools are found in the yards. Cowdung, which is regarded as a general antiseptic and purifier, is freely used in leeping the floors of mud, and even of masonry houses, sometimes making them damp when the process is pushed too far. This is bad, as the people in villages generally sleep on the ground floor. The Hindu men bathe and wash their clothes once and the women twice. They change their clothes if defiled in any way, such as by touch of cooked food, or in obeying the calls of nature which impregnate the clothes with foul smell arising from the excretion. The diet and food of the Hindus are prescribed in the Shastras. Vegetables vary according to the day of the moon, and fish is prohibited, and fasts, more or less entire, enjoined at new and full moon to adult men. Two meals—first at mid day and second late at night, both heavy—are to be taken. The case of Hindu widows is well known and need not be dwelt on A religious sanction or prohibition is attached to everything a Hindu may do in order to make it binding on his conscience, so that he does everything religiously. The Hindu lying in room is mostly ill-chosen. It is either

a newly-made room with damp earthen floor and with leaf walls and roofs, or the most dark and ill-ventilated room in the house, and a roaring hot fre is kept up day and night in it. The parturient mother is drugged with large boluses made of powdered black pepper and ghee and fed with beaten rice (choora fried, and all liquids are withheld. On the fourth or fifth day she is allowed some rice and vegetables, but no fish during the whole lying-in time, which is over on the 21st day, or in three weeks. The child is smeared with mustard oil and exposed to the sun to harden it, the oil being supposed to act like flannel. The lying in period is considered to be infectious, so beggars do not get any alms, and dirty clothes are not sent to the wash. The same restrictions are observed when a death occurs in a house, with the addition that no shaving or cutting of hair by the barber is allowed during the whole time of mourning. These restrictions are very sensible and help to localise any contagious disease. The period of mourning varies with the castes,—10 days for Brahmins, 15 days for Baidyas, and 30 days for Sudras, showing the Brahmin law-givers had been guided by selfish motives, as all deaths are equally contagious, if at all. Low caste Hindus and Mahomedans, as a class, are not so clean in their personal habits from a Hindu point of view. They do not regard contact with cooked food as defilement. Again, three or more persons will eat out of the same plate. They do not go in for leeping, washing and scrubbing like the Hindus. They do not observe any restrictions at births and deaths, neither do they go in for frequent washings and ablutions. Otherwise there is not much difference between the two classes. People in villages sleep on the ground floor with only a mat for their bed-They go about bare-headed and bare-footed with a cloth covering the lower part of the body. Women wear their saris so as to covering the whole body, but both men and women are thinly and insufficiently clad, and liable to suffer from cold and inflammation in severe and inclement weather. surroundings of a home are not clean, as manure pits, rubbish of all sorts, and night soil are frequently to be met with. Water-supply.—The people are not so apathetic as regards good drinking water as is generally supposed. They try and procure the best water available, and will walk even long distances for it. They are not so particular, however, as to water for washing and culinary purposes. Registration — This was looked after in the usual manner, and it was found that deaths were correctly reported. Advice tendered -Dr. Gupta advised the people everywhere to clean and reserve tanks for drinking water, and not to pollute by defectation road and tank Recommendations.—He makes the following recommendations:—(1) One or two tanks should be cleared and reserved for drinking water. (2). rules of Manu prescribed that a Hindu should rise betimes, take his bow and arrow, go out to the cutskirts of his village, shoot his arrow and follow it. Wherever it alights he was to align the defecate, and then cover it up with There would be no complaint if a Hindu followed this injunction, but this is not done. He goes to the nearest and most convenient spot and pollutes the air and ground. Every house holder should dig a trench at the furthest corner of his house and to the leeward, and use it as a latrine for a time, and then cover it.

197. MUNICIPAL INSPECTIONS.—The great defects of the small mofussil Municipalities are obstructed drainage, bad conservancy and foul water-supply. The drains and holes and excavations in every Municipal town are full of water during the rains. Surveys should be undertaken and levels made in order to improve the drainage. Very few mofussil Municipalities possess public latrines, and Part IX is not in operation in most of them. Suburbs of Calcutta.—Domestic cleansing.—The sanitary condition of this Municipality is much the same as before. In most of the gowalla bustis the shed or place where the cattle are located is a sen of liquid filth pent up or partially flowing into side drains or on roads." Heaps of refuse and rubbish are to be found. The Maharatta ditch is more or less full of sludge or filth from one end to the other. Drainage is more or less neglected. Drinking water is sometimes obtained from tanks in gardens or other places, and these are in better condition and contain fair potable water. Those who buy or steal filtered water from the Calcutta hydrants are best off. Conservancy.—House service is done by contract, but the work is much neglected and not performed daily. The number of the public latrines is altogether inadequate, and they are to be found in only a few bustis, and are not kept

clean. The Singottee busti is most filthy, and the offal and bones of slaughter-cattle are taily burnt there, evolving a most offensive stench. General health.—Cholera is never absent from the Suburbs. It prevails epidemically twice in the year, viz., once in November and December and again in March, April and May. The various types of fever, diarrhoea and dysentery are also common. The death-rate from all causes, specially from cholera and fever, is generally very high,—much higher than in the Metropolis. Suggestions for improvement.—Dr. Gupta submits the following suggestions:—(1) The great remedy for the amelioration of the insanitary state of the Suburban Municipality is its amalgamation with the Calcutta Corporation. The people being poor and the income limited, the Suburban Municipality can never expect to do much in the way of improvement, although it must be stated that they have done a good deal in the way of improving roads, drainage, bustis, water-supply, &c. (2) Conservancy should be improved, and daily removal of night-soil rigidly enforced by doing away with the contract system and employing a municipal establishment, as is done in other towns. Public latrines should be built in every busti and kept clean. (3) The gowallas should be compelled to register their trade and to submit their premises to inspection and control. The Municipality should make arrangements for removing the cowdung and urine, which could be sold as valuable manure at a considerable profit. (4) The tanners and the butchers should also be controlled and their trades regulated. All piggeries and offensive trades, such as bone-burning, should be removed outside the limits of the Municipality, and the scavenging stand should be removed far from the Animal Vaccination Depôt.

198. Assistant Surgeon Umes Chunder Ghose, Deputy Superintendent, First Metro-

	Thanas.	No. of villages,	Thanas.	No. of villages
JESSORE DISTRICT.	(Bongong Caighata Gourepotha Mohespore Sarsha Gadkhalli Jessore Monirampore Jhenida Salkopa Kaligunge Kotchandpur Salikha Magura Narail Kalia Lobagara Muhamadpur	14 26 26 26 39 11 6 25 11 10 29 13 19 4	Khulna Kaliganj Kalarua Satkhıra Magura Asasuni Bagirhat Moreilganj Mollahat Rampal Baraset Naihati Habra Deyganga Dum-Dum Bassirhat Hasnabad Bhaduria Haroa Bhangor	17 21 12 9 9 7 34 20 28 28 16 4 8 18 18 18 11 15 21 21 11 15
				139

politan Circles.—This Officer's Sanitary Inspections extended over 15 Municipalities and 598 villages in the thanas in the districts named in the margin, and the following abstract from his detailed and interesting report on the subject discloses the sanitary estimate of these towns and villages.

199. The villages in thanas Kaliganj, Asasuni, Paikgatcha, Rampal, Moreilganj, and part of the Bagirhat thana in the **Khulna** District and half of the Bhangor, IIaroa and Hasnabad thanas in the **24-Pergunnahs** District are situated on a comparatively lower level than the other thanas in the Circle. About half the

number of villages in thanas Kalarua, Magura, Dumuria, Baitaghatta, Khulna, and Morelloanj in the Khulna district and of thanas Magura, Narall, Kalia, and Lahagura in the Jessore district are situated on the banks of rivers. Swampy tracts of rice cultivation are common, and undergrowth and jungle are more or less abundant everywhere, the latter especially in the Magura and Mahomedpur thanas and in part of the Narall and Lahagura thanas in Jessore and in the Sudder thana in Khulna. The soil of the circle is clayey, except in thanas Mollahat in Khulna and Kalia and Lahagura in Jessore, where it is sandy. The following observations are common to all the thanas in the Circle, with scarcely any differences. Dwellings and Domestic cleansing.—The dwellings are badly constructed, and as a rule devoid of ventilation, excepting, to some extent, those which have their walls-made of split bamboo, as air can pass through the crevices between the bamboos; but as these openings are permanent, the people are exposed to cold and rain. The floors of the dwellings are generally kutcha, but are kept clean by leeping them almost every morning. The house yards are swept regularly twice a day, except at harvest time. The bed clothes are

rarely washed, but are from time to time exposed to the sun. The house. cook-room and other refuse, and the excreta of cattle, are collected near the houses, where they remain and decompose till they are removed for manuring the fields. The Mahomedan houses are, as a rule, surrounded with jungle and superabundant vegetation, to enable their females to obey calls of nature unobserved by outsiders. The cattle are generally housed separately, but the poor keep them in the verandahs of their dwellings. In general conservancy there has been no change. It may safely be said to be nil. Roads.

—All the sub-division stations, except Magura in Jessore and those in the

24-Pergunnahs, are connected with their head-quarters by metalled roads. There are some metalled roads in the 24-Pergunnahs, but scarcely any in Khulna. These roads pass through some of the villages, and where such is the case, the people are afforded the benefit of communication. On the whole, however, roads are a crying want of the people. Drainage.—It would be no exaggeration to say that anything like a drainage system is almost absent in the Circle. Most of the rivers and khals, which formed the natural drainage of Jessore and 24-Pergunnahs, have silted up, prominent among them being the Soonti and Nowayee nuddis in the Baraset sub-division in the 24-Pergunnahs. nahs and the Betna in the Bongong sub-division in Jessore. Another peculiarity remarked this year is that the banks of the rivers are on a higher level than the places away from them, and as a consequence the water of the bhils cannot easily discharge into the water-courses. As remedial measures, the water of some of the abads in the 24-Pergunnahs is artificially drained into some rivers and khals to help cultivation; the indigoplanters of the Magura sub-division in Jessore have excavated a few canals for irrigation and drainage purposes, which have proved successful to a certain extent; and Government has excavated one canal to drain bhil Bullay in the BADURIA thana in the 24-Pergunnahs. On the other hand, the people of Moreilgunj, Rampal and Bagirhat thanas, instead of draining the water of the busti into the khals, have done the reverse, in order to help the growth of betelnut and cocoanut trees. The Central Bengal State Railway embankment has to a certain extent obstructed the drainage of the Baraset and Bongong sub-divisions. Water-supply.—This is defective in almost all the thanas of this Circle. In the 24-Pergunnahs the people in the Dum-Dum, Baraset, NAHIATI and HABRA thanas take their drinking water from the Soonti river and from tanks. The river has silted up and stagnated, and is full of decomposing weeds and leaves from bamboo jungles along its banks. In some places certain portions of the river have been converted into tanks by embankments placed across it. In the Barasi r than a most of the tanks are old and shallow, and dry up in April and May. The water of some of them was green in February. In Days NGA hana there are some large tanks known as "Seteye dighis," but these have become old and shallow, and require to be de-watered and re-excavated. The other tanks are shallow and full of weeds. The Padma nuddi dries up in April and May, when the people make excavations in its bed for water for drinking. In some villages in the Bhangor than there are a few good tanks, but in the others shallow tanks and bhils are used; but they dry up in April and May, when water has to be brought from a distance of three or four miles. In almost every village of HARWA thana there is at least one tank situated at some safe distance from the bustis; but they have become old and shallow and are covered with weeds, and on the banks of some of them there are Mahomedan burial-grounds. If these tanks were de-watered and re-excavated, pure drinking water would be available. In Hossainabad than there is the Itchamuti river; but its water is fit for drinking only in winter, as it becomes brackish in the hot and rainy seasons. There are, however, a few good tanks here and there. In some villages the people have to bring their drinking water from a distance of seven or eight miles. In the Bussirhar than some villages get the water of the Itchamuti river; but the majority of them take it from old shallow tanks which dry up in April and May, and are covered with weeds. There is a large tank, known as Naora dighi, about two miles distant from the subdivisional office. It is situated on a safe site, but its water is contaminated by drainage from the fields and decomposing weeds, especially during summer. In the Baduria thana the inhabitants of the villages which are situated on

the banks of the Itchamuti river resort to that river, but the others have to depend on bhils, baors, and dirty shallow tanks full of weeds. (n the baors Water-supply in Jessore.—In the GAIGHATTA thana some jute is steeped. people take their drinking water from the Itchamuti; but this river is covered with weeds, innumerable branches of trees are steeped in it to attract fish, and dead bodies are cast into it. Others take it from baors and tanks, but the tanks have become old and shallow and are full of weeds. In the Bongong thana, the condition of the water-supply is almost the same as in Gaighatta, the only difference remarked being that there is more current in the river than at Gaighatta. The Gopalnagore baor is also resorted to, but its mouth has silted up and requires to be opened to establish communication with the river. In the GAURAPOTA thana a few villages use the water of the Itchamutti river, some villages take it from the Kodla river, which is full of weeds; some take it from the Betna river, which emits nauseous smell from decomposing weeds; some take it from baors, bhils, and old shallow tanks which are full of weeds, and most of which dry up in April and May; and some take it from cuttings or excavations, the water of which is almost black. In the Mohespur and Kotechandpore thanas, the inhabitants of some of the villages depend for water on the Kapadak river, commonly known as Bhoyrub nuddi. This river is full of weeds; kumars (contrivances to attract fish) are put into it; and dead bodies are cast into it. The inhabitants of the other villages take theirs from bhils and baors and from old, dirty, shallow tanks. All of these are full of weeds; kumars are placed in the baors; and some of the bhils, baors and tanks dry up in April and May, when the people make excavations in their beds for water for drinking. The inhabitants of some of the villages of the Mohespur than have to walk a distance of two or three miles for a vessel of drinking water. In the Kaligunj than some villages take water from the Chitra river and from baors, but kumars are placed in these reservoirs, and they are full of weeds; some use the straw-coloured water of some dirty ponds; some take it from wells, but most of these are situated on objectionable sites; their cone of percolation is not kept clean and free from contaminating causes; and bathing and washing of utensils are carried on in proximity to them. Some of the wells have mud parapets around their mouths to prevent inward drainage. The people of some villages have to go a distance of two or three miles for a vessel of comparatively good water. In the JHENIDAH thana the water-supply for some villages is taken from the Beng river and from khals which are full of weeds. Some villages take it from the Nobagunga. The water of this river is good, but its current is obstructed by bandals (embankments across the river) and kumars. The SALEKOPA than a receives its water-supply from the same river. In the MAGURA thana the inhabitants of most of the villages take it from the river, and those of a few from cuttings and excavations. In the Mahomedpur than athree-fourths of the villages use river water, and the rest have to depend on bhils and tanks. former dry up in summer, and then the people have to obtain water from a distance of three or four miles. The inhabitants of some of the villages of Salika thana take their drinking water from the Chitra and Fulki rivers, which have silted up to a certain extent and are full of decomposing weeds; while the others have to content themselves with water from bhils and shallow tanks. In some villages, however, there are pretty good tanks. In more than half the number of villages in the Lahagura, Kalia and Narail thanas the people use river water. In the Monirampore than some villages take water from the Kapadak river, which is full of weeds and contain kumars, and dead bodies are cast into it; some villages take it from the stagnant Bhoyrub, which is covered with weeds; some from the Harihar nuddi, which dries up in summer, when the people make excavations in its bed; and others have to content themselves with the water of bhils and shallow tanks. In the Sudder (Jessore) thana some of the villages resort to the Bhoyrub and Mukteshwari rivers, which are full of weeds and have silted up at their sources; some villages have wells, but they are situated on objectionable sites, have no parapets around their margins, and are polluted in many ways; and some villages use old and shallow tanks. The water of the Kapadak river, which is full of weeds and kumars, and into which dead bodies are cast, is used by some of the villages in thana Gadkhalli; while other villages obtain water from bhils and baors, which are

full of weeds, and some of which dry up in April and May. In the Sharsa than a some villages resort for water to the Itchamutti, some to the Betna and Kodla rivers, which are full of weeds, and some take theirs from shallow tanks, bhils and baors, some of which dry up in April and May. WATER-SUPPLY in Khulna.—In the Kaligunge and Assasuni thanas, water is generally taken from cuttings and shallow ponds which are covered with weeds; but in a few villages there are one or two pretty good tanks. In the SATKHIRA thana the people drink tank water. Some of the tanks are good, but most of them are in a bad condition and contain animalcules, and the water is muddy Many villages in the KALARUA thana take water from the Betna river. This river has silted up at its source; is full of weeds; dense jungle covers its banks; dried leaves fall into it; and dead bodies are cast into it. The decomposition caused by the weeds and leaves is so great in summer as to kill even the fish. At this season also the want of water is so bitterly felt that the people prefer the water of old shallow tanks to that of the Betna. In the Magura than a some of the villages use the water of the Kapadak, which is full of weeds, and kumars are placed in, and dead bodies are cast into it; while other villages have to content themselves with the water of shallow and In the SUDDER (Khulna) thana, the dirty tanks which are full of weeds. Bhoyrub and Atarabanki rivers are resorted to by most of the villages, but dead cattle are more frequently thrown into them than into any other river in the Circle. The villages in the BAGIRHAT, RAMPAL and MORRELGUNJ thanas, which skirt the rivers, drink their water, especially during the winter; in the other villages tank water is used, but almost all the tanks contain weeds. In village Demma in the Rampal tham, the vegetation is so luxuriant in one tank that an elephant can easily hide therein. In the Mollahat thana, river water is drank by all the people. Disposal of dead .- No improvement was seen under this head. In the report for last year it was stated only the poorer class of Hindus cast their dead into water-courses, that but the observation of this year disclosed a worse state of matters, for even the higher class of Hindus follow the same reprehensible practice. Food-supply.—In some villages in the Bongong sub-division in Jessore the poorer class of people were found to be very badly off in this respect, as they had to subsist on one meal a day, owing to the crops having been destroyed by inundation during the last two years. No scarcity was observed in any other place. Milk, one of the most important articles of diet, is scarce in The zemindars are converting the pasture lands into cultivable ones; the cattle have suffered by eating grass which had been submerged and become half rotten during the inundation; and in many villages the cattle cannot have sufficient water. The to these causes combined the breed of The fish supply is also diminishing, as a large cattle is fast degenerating. quantity of it is exported by rail to Calcutta and other places; and the fishermen remark that the number of fish in the water-courses is also getting less. Clothing.— The observations of the Assistant Surgeon go to show that more than half the rural population in the Circle are insufficiently clad. During the winter months it is really pitiable to see the children of the poor with only a piece of thin rag on their bodies. Jute-steeping.—Jute is cultivated in all the thanas of North 24-Pergunnahs, in the Sudder and part of Bongong thanas in Jessore, and in a very few villages in Khulna. It is generally steeped in pits and excavations within the villages, and in the roadside cuttings. In some villages it is steeped in ponds and shallow tanks the water of which is used for domestic and culinary purposes, but very rarely in tanks and water-courses from which people take their drinking water. The process is carried on from the middle of August to the middle of October, when fever is prevailing almost everywhere, and the Deputy Superintendent says that, as decomposition of weeds and other organic matters remain in the villages, it is not easy to say how much fever and bowel-complaints are due to this cause; but that there is "not the slightest doubt in the mind of any sensible man that the process of steeping of jute contributes to a certain extent in giving birth to the maladies." General health.-In Jessore the health of the people was indifferent, and enlargement of the spleen was seen everywhere, except in thanas Bongong, Solekopa, and in parts of the JHENIDA, KALIA and NARAIL thanas, where the health was pretty good. In Khulna the people of Bagirhat, Rampal, Morrelgunj and Mollahat thanas

enjoyed pratty good health. In the other thanas they suffered much from fever and enlargement of the spleen. In SATKHIRA thana out of 100 persons examined indiscriminately, enlargement of the spleen was found in 79. 24-Pergunnahs the health was judifferent in all the thanas. Advice tendered .-The Deputy Superintendent reports that, whenever possible, he pointed out the sanitary defects to the people, and that in some places they recognised them, but that in many they paid no attention to the suggestions. Suggestions for the rectification of important Sanitary defects.—The same Officer submits the following suggestions:—(1) That the silted-up beds of the rivers and khals be cleared, and the people prevented from casting corpses and carcasses, and the fishermen from placing kumars and bandals in them. (2) That the old shallow tanks be de-watered and re-excavated. Unless the Government take this matter in hand, there will be no hope of improvement in this direction, as the zemindars are apathetic and indifferent to the sufferings of the In many places there are large old shallow tanks outside the village boundary which may be taken up beneficially, and the owners forced either to de-water and re-excavate them themselves, or to sell them to the Local Boards, who should be requested to lay aside a portion of their income for improving As scarcity of water is very general, it would not be an easy task to excavate new tanks everywhere, unless the suggestion put forward by Dr. Gupta in the Englishman newspaper of a recent issue, that if a fund were raised in commemoration of the Empress's Jubilee, for excavating new tanks, could be given effect to. (3) That all undergrowth and bamboo jungle, especially on the banks of rivers and tanks, be removed. Registration.—This subject was carefully attended to.

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200. Assistant Surgeon Preumber Mittra, Deputy Superintendent of Vaccination, 2nd Metropolitan Circle.officer's sanitary inspec-This tions extended to 6 towns and situated in villages thanas in the districts named in the margin. The report submitted by him is interesting and very exhaustive. The following abstract embodies, for the sake of abridgment, only the salient and useful observations connect- \mathbf{ed} with sanitation contained therein.

201. Nuddea.— GENERAL OBSERVATIONS RELATING TO THE DISTRICT AS A WHOLE.—This district is on a lower level than the districts of Jessore and Murshidabad. It is drained by the rivers Bhagiruthi, Khuria, Churni, Itchamatti and

Pudma with their branches. It is devoid of hills and has no forests. The soil is, on the whole, clay with an admixture, in some parts, of sand, and is retentive of moisture for a long period. Its climate is humid or moist, specially during the rains, and in autumn the atmosphere is charged with paludal miasm which causes increase of fever. It is more subject to floods than the surrounding districts. Nevertheless it has not been yet provided with embankments, and consequently a large portion of it remains under water. The soil is fertile and suited for the cultivation of rice and other cereals, including tobacco, betel, sugarcane, &c. General health.—There was a little more fever than during 1885, when there occurred a general inundation, indicating the good effects of flooding. There was somewhat less cholera, and the outbreaks were generally sporadic in character.

202. OBSERVATIONS MADE AT EACH THANA VISITED IN THE **Nuddea** DISTRICT. Ranaghat thana.—Dwellings and Domestic cleansing.—The houses are free from ground damp. Domestic cleansing is regulated by the social status of the people, but the houses of the gowallas and moochis are generally unclean. The Maho-

medans also do not, as a rule, care for conservancy or cleanliness. / Cow-house refuse and cowdung pits are common, and were found to be prejudicial to health. In several villages sweepings and other refuse are thrown and accumulated on the pathways and passages, or obstruct the ditches, and defecation around dwellings and in the beds and on the banks of rivers is common. pools and water-logging in the passages in village Ayestollah were found to constitute a great nuisance and to be detrimental to health. Bamboo clumps do not abound in this thana, but in several villages jungle is abundant, which "exhale miasmatic emanations." Roads and Drainage.—Fair-weather roads are wanting in many parts of this thana. There are no drains, and the ditches are obstructed in the manner above stated. Water-supply is generally taken from tanks and bhils. The tanks are covered with pana (Pistia stratiotes) and other weeds, and are contaminated by washing of clothes and cattle, by refuse thrown on their sides, by defectation around and about them, and in other ways. No tanks have been set apart exclusively for domestic purposes. Many of the large tanks in Gangnapur and many other tanks are muddy, or in a silted-up condition. There are very few bhils, and the Puddo and Nashter bhils, which are somewhat important ones, are shallow and muddy, and dry up in summer. Disposal of the dead .- The Mahomedans have no fixed places for burials, and at Duttapulia the Bysnabs bury their dead in a sitting posture at a small depth. Jute.—This is largely steeped in the tanks in Ayestollah and Mohishdanga, and is considered a probable cause of increase of sickness. General health was, on the whole, better than in the neighbouring thanas; but it was noticed that the population of village Catawari has been much reduced by fever and cholera during the last three or four years. Chagda thana.—This thana is situated on a lower level, and is much more flooded than the neighbouring thanas of Ranaghat, Jaguli and Santipore. The soil consists of a mixture of clay and sand, which retains moisture for a long time. There are a few chur villages in this thana. Dwellings and Domestic cleansing .- The houses are not crowded together, but are defective in internal ventilation. They and their surroundings are kept in a filthy condition. Jungle abounds in several villages. Conservancy is little cared for. Cess-pits, emitting unpleasant odours, exist; sweepings, cattle litter and every other refuse lie about; rank vegetation surrounds many houses; the cattle are not properly housed; cowdung is accumulated for manure. In some villages, however, cowdung is dried and utilized as fuel. Roads and Drainage.-Thoroughfares are deficient in many villages, there being only a few cart tracks. The natural drainage is not sufficiently free, and there are no drains by the sides of the roads. Water-supply.—This is taken from rivers, bhils, khals, or tanks. The tanks are as highly pluted as in Ranaghat. Those in Narapatipara were found stinking from uri dál, a vegetation which has the property of rendering the water turbid. A good tank, containing wholesome water, was seen at village Kulia. It had been recently excavated. The khals dry up in the dry season, and then the people dig in their beds for water; but the pauper dead are cast into them as well as into the rivers. The river Jamuna has silted up, and is overgrown with vegetation. Villages Ghunghunia and has silted up, and is overgrown with vegetation. Villages Ghunghunia and Shealdanga suffer most for want of water during the dry season. In villages Rowtari there is no tank, and the people consequently use the water of the hollows for all domestic purposes. The water of the Boysha bhil below villages Shealdanga and Ghosepara, and of the Jamuna river below Shealdanga is commonly drank. Jute.—This is steeped in several places in hollows, tanks, bhils, and in the Jumuna river. The use of jute-steeped water is believed to have caused fever in village Narapatipara. General health was found to be prominently bad in villages Kawapara, Kulia, Katagunga and Gatrapur, owing principally to the prevalence of fever. At Kawapara the fever of former times has already much reduced the population, and at Kulia this melady as well as absolute had a similar effect. Here a large number of piloring malady as well as cholera had a similar effect. Here a large number of pilgrims and visitors assemble annually in Augrahan (November) at the time of the Chaitanna or Thakurbari mela. Santipur thana.—This is a small thana of 60 villages. It is on a lower level than thana Kotwali, but a little higher than Runaghat. Dwellings and Domestic cleansing.—The houses are crowded together in several villages. They are kept tolerably clean, and their floors are free from damp; but subbish, litter and other refuse are accumulated in the main

pathways. The housing of cattle is fairly well looked after. Bamboo clumps and much jungle and rank vegetation are common. Roads and Drainage.—There is one high road from Santipore to Kishnaghur, but village communications and thoroughfares are wanting. The Drainage is pretty fair; and there is a long jole which serves the purposes of a drain. Water-supply is obtained from the Bhagiruthi or Hughli river, Nijhone khal, the Khalshi bhil, and tanks which are numerous. The khal is full of dál grass and moss. The bhil contains good water. Of the tanks, the one at Panchpota, which has been recently excavated, contains good water, and the dighi at Gobindpur is also good, but is surrounded with jungle. The rest of the tanks are in bad condition, unprotected from surface drainage, muddy and full of pana and decaying vegetation. There are also many foul holes amidst bamboo clumps. Disposal of the dead. There is no fixed burial-ground for Mahomedans, and no arrangements for the disposal of dead cattle. KALUPOLE thana. - The soil of this thana is alluvial along the banks of the Itchamatti, and clayey and not very fertile in the There are two or three chur villages in it. Dwellings and Domestic cleansing.—The houses are not crowded together, but are deficient in internal ventilation. Bamboo clumps, overhanging hollows and pathways, abound, and rank vegetation, luxuriant from excessive rainfall, is common. Busti cleansing is not properly attended to, and the gowalfa bustis are invariably the most filthy. There is no arrangement for the removal of household sweepings, refuse and litter: they are thrown anywhere or accumulated on pathways. In Krishnapur there are pits containing decomposing cowdung, and the same is to be met with in heaps at Hatdaha and Chand-Village Ujjulpur is honey-combed with hollows containing foul water, and bamboo branches overhang them. Defection is carried on on the public pathways, which are also bestrewn with cattle bones. Roads and The drainage is defective. Rain-water Drainage.—Village roads are scarce. stagnates on the village pathways, being obstructed in its outflow, particularly at Akandaberia and Chandpur. A jole on the west of Saraberia serves the purposes of a drain, and there is also much water-logging. Water-supply.—This is obtained chiefly from the river Itchamatti and its offshoots, from bhils, the jole at Saraberia, and a few tanks. The Itchamatti is almost dry in summer, and is covered with weeds and noxious plants. The water of the bhils is impure during the dry season, and the Bhoyrah bhil at Akandaberia is subject to contamination in various ways. The tanks have silted up. There is, however, a good dighi in Kaharpara, but twigs of trees are placed in it to catch fish. Disposal of the dead. - The pauper dead are sometimes cast into the Itchamatti river, and the Mahomedans inter their dead in the compounds of their houses. Jute is steeped in hollows at Akandaberia and Balkedanga. General health was rather worse than in the other thanas. There was an increase of fever in the jungly villages. Village Akandaberia is a markedly malarious locality. Cholera, in virulent form, appeared in April in Chandpur. DAMURHUDA thana.— This thana is situated on a lower level than Kalupole, but higher than Nobinnuggar. The Howli is the only river in it, and it is embanked against flooding between Paranpur and Loknathpur. Dwellings and Domestic cleansing.—
The arrangements under this head are much the same as in Kalupole, except that it is not so unclean as that thana. The ditch along the Railway and behind the bazar at Ramnagar was found full of filth and decomposing vegetable and animal refuse. In a few villages cattle dung is dried and utilised as fuel. Roads and Drainage.—There are no village roads, excepting cart tracks. There is a public pucca road from the Ramnagar Railway station to Kotechandpur, but it was breached in the preceding year and has not been repaired. There are no trees for shade on this road. The natural drainage is pretty free, but the Howli embankment retards drainage of rain-water. The Naljore jole is a sort of outlet for the drainage of the villages situated about it. cart tracks in the villages serve the purposes of drains. Water-supply.—Water is taken from the river Howli, bhils, and wells. Tanks are rare. The bhil behind Dudpatila has deteriorated, and its water is unfit for drinking. best well is at Paranpur. In the same village there is a zemindari tank which has silted up, and contains water rendered unwholesome from decaying vegeta-Disposal of the dead.—Interments take place in the compounds of houses or in lands adjoining the villages, and the pauper dead are generally thrown

into the river Howli. Jute-steeping is carried on extensively in Sandrajole on the south of Ramnagar. General health was good on the whole. ALUMDANGA thana.—This thana is situated on a higher plain than the two above-mentioned. The soil is generally clayey and not very retentive of moisture, but consists, along the Howli river, of an admixture of clay and sand. are several chur villages in this thana. Dwellings and Domestic cleansing.—The houses are built widely apart from each other, and their floors are not damp. The villages are, with few exceptions, pretty free from jungle, but bamboo clumps are plentiful in the vilages along the Howli river. Heaps of sweepings and refuse are to be met with. Defectation on the pathways, passages, the sides of tanks, and in the dry bed of the river Howli is very common. On the whole, however, it was observed that domestic cleansing is somewhat better attended to in this than in several other thanas. Roads and Drainage.—The roads are inadequate, and even thoroughfares are wanting, or are narrow in many villages. The Chho-The few roads which exist are not planted with trees for shade. goria and the Kanchakata roads were breached by the floods. Drainage is tolerably free on the whole; but Ailhoria, Gopaldanga and Sinduriakoti are not well drained, and many villages are water-logged, especially the chur villages. Water-supply is taken from the river Howli, the Bhantrye nuddi, Chahla bhil, and from tanks. There are only a few wells. The nuddi, having no connection with any water-course, is rapidly polluted, and its water becomes unwholesome during the dry season. The bhil is rendered unwholesome from decomposing vegetation. The tanks have silted up and are covered with moss, weeds and other vegetation. At Puntimari, want of water is much felt, and a tank is very much needed at Pultadanga. Disposal of the dead.—The pauper dead are generally buried or burned at Government expense, but bones and skulls were seen on the road leading to Kanjuria Koti. General health was on the whole good, and better than during the last two years; but village Khoskarora suffered pre-eminently from fever and cholera. JIBANNAGAR thana is situated on the same level as Alumdanga. The river Itchamatti forms its boundary, and the Bhyrub is the only stream which flows through it. There are no chur villages her. There is a barren tract of land between Sanirhuda and Dumuria, and a marshy bhil extends from Uthati to Chandpur. Dwellings and Domestic cleansing.—The houses are not crowded together, but they are wanting in interior ventilation. Jungle is rare, except at Bajirdia. Domestic cleansing is fairly attended to. Defectation takes place on the village passages, on the Ramnagar road, and amidst the bamboo clumps at Dehati. The mode of keeping cattle generally is objectionable. Roads and Drainage.— The Ramnagar road is the only convenient thoroughfare, and the villages are very deficient in path ys. The drainage is defective in some parts. The drain in Dumuria has been obstructed with silt deposits, and is covered with luxuriant vegetation, and this village and Andulberia and Hajridia are water-logged. Water-supply is had from the river Bhyrub, khals, bhils, bandhs, joles and tanks. The water of the river is discolored at spring time owing to its mouth having been obstructed by the Railroad at Joynugger, where the bridge is too small to admit of free flow of water. The bhils are used as public latrines and in other objectionable ways. The khal on the west of Aktiarpur has silted up and remains dry during the greater portion of the year, and is fouled with fœces, and the Kajla bhil is full of vegetation. The water of the Saraberia jole is impure. There are, very few tanks, and they are generally shallow, and the only good ones are, one in the indigo factory at Dehati, and another at Dumuria. The former is well protected from pollution, but the latter receives surface drainage through an inlet. Disposal of the dead,— There is no fixed place for the interment of the Mahomedan dead, and no arrangement for the disposal of dead cattle. General health was, on the whole, good. The only places where cholera prevailed with marked severity was village Andulberia and its neighbourhood. The lime-kilns in this village are said to affect its health. Korwall than is situated on a somewhat too high level to be affected by floods. Dwellings and Domestic cleansing.—The houses are scattered and widely apart from each other, and many are enclosed with hedges. Jungle is comparatively rare, except in a few villages. Bamboo clumps are plentiful at Durgapur, Mohishnanger and Dogachi. Domestic cleansing is, with few exceptions, better attended to, but household refuse is not

properly disposed of. Hollows, containing vegetable and animal impurities and stagnant water, and manure pits and dung heaps are to be met with. The chowkidars engaged to look after the Dignager bazar do not attend to its cleanliness. Roads and Drainage.—This than a is better provided with roads. The natural drainage is defective. Water-logging takes place in a large tract of country west of Harlichola lying between the Kauchi road (intended for the railway from Ranaghat to Kishnaghur) and the Santipore road. This road obstructs the drainage of Harlichola, which can be rectified by constructing a large pucca culvert at the point of obstruction. A large jole and the Bagdihi khal drain the Dignager side of this thana. Water stagnates in the Dagachi road and in the road between Nagurghati and Dagachi. Watersupply is taken from the rivers Khoria, Anjona, Bhagiruthi and Julungi, from the Gapaye nuddi, and from khals, tanks, joles and wells. The river Anjona has silted up very much. Many of the tanks have also silted up, are covered with vegetation, are highly polluted, particularly by bathing of cattle in them, and dry up in summer. The Dignager dighi (tank) is densely covered with jungle, and its banks are used as a public latrine. The Mahatpur dighi is also beset with jungle and is full of aquatic plants. A tank has been reclaimed at Hatichota. The people in village Bhatjangha suffer much from want of water during the dry season. Disposal of the dead.—The pauper dead are thrown into the Baman below Hatichota, and there exist no arrangements for the disposal of dead cattle. General health.—In this thanah fever has increased from the last three years, and it was persistently prevalent this year. It is believed to have reduced the population. The polluted condition of the silted-up Anjoni river is said to cause the fever. Kissenganj thana is situated on a somewhat low level, and is subject to flooding. The soil is alluvial with alternations of impermeable clay. There are some uncultivated tracts. Dwellings and Domestic cleansing. The former is much the same as in Kotwali. Jungle exists here and there. Domestic cleansing is not properly attended to. The house sweepings and refuse are thrown anywhere, and defocation is carried on on the sides of the pathways. Roads and Drainage.—There are some three or four roads, but they are devoid of trees. The drainage is pretty free on the whole, but waterlogging occurs in some places during the rains. Water-supply is taken from the rivers Itchamutti and Churni and from bhils and khals. Tanks are very rare. The Sundey and Malshagari bhils are covered with acquatic plants—nasidan and dul—which have imparted a reddish tinge to the water. Disposal of the dead.—There is no fixed place for burying; the Bhysnubs throw their dead into the river, and the pauper dead are also treated similarly. There is no arrangement also for the disposal of dead animals. Jute.—This is largely steeped in the Paltu khal. General health.—Malarious fever of past years is said to have reduced the population of this thana. Cholera prevailed with some severity in some villages this year. There is a marshy bhil between Shamnagar and Ghugragachi which is suspected to cause sickness. Chapra thana is situated on a comparatively low level, and is consequently accessible to floods. Dwellings and Domestic cleansing.—The dwellings are much the same as in Kissenganj, but this thana is free from jungle, and bamboo clumps are rare. Domestic cleansing is very much neglected. There are many gowalla villages, where the cow-houses and their surroundings are very unclean, and the stench from them is abominable. There are pits and hollows in several villages, which are full of rubbish, litter, &c., and some contain human excreta, the Dumuria village being honeycombed with these excavations. Roads and Drainage.—The roads are very few, and thoroughfares are wanting in several large villages. Many of the villages are badly drained. The embankdul-which have imparted a reddish tinge to the water. Disposal of the dead.in several large villages. Many of the villages are badly drained. The embankment of the Kuli khal obstructs the drainage of the villages in its neighbourhood Water-supply.—The sources of water-supply are the same as in Kissenganj thana. The khals in this thana are the Kaligangni, Korakati, Kuli and Poldi. The first is very muddy, and the banks of the Poldi khal are resorted to for defocation, particularly near village Dangni, and its water is greenish from vegetable decomposition, and that of the Kunkuradaha bhil contains animalcules. Of the bhils, the Kolinga is overgrown with moss and acquatic plants, and its bed is muddy, and the Imandaha and Dharumhata are loaded with vegetation; but the Dudkhola bhil contains clean and wholesome water. Most of the khals and bhils dry up on the approach and wholesome water. Most of the khals and bhils dry up on the approach

of summer, when the people suffer much for want of water. Of the tanks, the Nittye Nundi dighi is covered with pana, and its water is very muddy. posal of the dead.—The arrangements under this head are exactly the same as in Kissenganj. General health.—The remarks about fever in the Kissenganj than also apply to this thana. Cholera prevailed in some villages, and is attributed to importation by a pilgrim from Santipore, where the Rashgunga mêla was held in Kartic (October). The population of village Gantra is said to have been reduced by the prevalence in it of cholera and fever during the past three years. The large number of houses in ruins in it is indicative of this. NAKASHIPARA thana is situated on a low level, and is very subject to floods. It is free from jungle, jhils and marshes. The soil consists of soft clay and polimatti from the frequency of the inundations, and retains moisture. There are uncultivated lands, mostly around village Balkumri. Dwellings and Domestic cleansing.—Much the same as in Chagdah under both heads. The gowala and moochi bustis are extremely filthy; but it is remarkable that household refuse is used in some villages in filling up holes in the neighbourhood of the houses. The slopes and sides of the Khoria river and of the khals, and gardens and village pathways are resorted to for defectation. There are many bad water-holes. Roads and Drainage.—Road communication is insufficient. The drainage is defective, the ground having no slope for the carrying off of storm-water. Water-supply is taken from the Khoria river and from bhils, khals and tanks. The river and khals are, as above stated, polluted by defectation, and at Bohergachi the tanks are similarly treated. Most of the tanks have silted up. The people in Kalibach and Barasirinlic suffer much for want of water during the dry season, and then they have to dig the beds of tanks and hollows to meet the want. Disposal of the dead.—The Hindu dead are taken to Goshpara for cremation. No arrangements have been made for the disposal of the pauper dead and dead cattle, and the skeletons and bones which were seen in the fields and passages of Shibpur and Skeletons and bones which were seen in the fields and passages of Shibpur and Dhananjoypur, verify this fact. General health.—This thana is believed to be less malarious than thanas Kissengunge and Chapra. There was less fever, the result of the inundations of 1885; but cholera prevailed very much, and was more fatal than during the preceding three or four years. It was remarked that the people are deserting this thana for want of food-grains. Kaligunge thana is low-lying and subject to great inundation, causing the people, when it occurs, to live on bamboo machans. Villages Kathuria, Chuck and Imampur are being encroached upon by the Bhagiruthi river. A bund is required on the Murkuli khal to protect a number of villages from the fleeds. required on the Murkuli khal to protect a number of villages from the floods. Dwellings and Domestic cleansing.—Much the same as in than Nakasipara. There is no heavy jungle that than, but in some of its villages the bamboo is closely planted. House-sweepings and refuse are accumulated in the compounds of, or before dwellings, and on pathways, and huge heaps of cowdung were seen on the pathways of Akundaberia, and manure pits in Chhutipara and Bara Itna. Defectation is carried on on thoroughfares and on the slopes and silted-up parts of the Bhagiruthi river. Roads and Drainage.—Want of reads is also felt in this there. of roads is also felt in this thana. Akundaberia and Imampur are much water-logged, and these villages and Bhargabuntapur and Gobra require to be provided with roads very much. The drainage in this thana is better than in Nakashipara thana. The outfall is towards the Ganges, and is pretty free. The cart track at Gobra and the main passage at Naoda have been largely and dangerously breached by the floods. Water-supply.—This is obtained from the river Ganges or Bhagiruthi, and from bhils, khals, baors and tanks. The bhils and tanks are covered with weeds and vegetation, and a few have silted up, and most of them dry up in the hot weather. Disposal of the dead.—The Hindus cremate on the banks of the Bhagiruthi, the Mahomedans bury within house enclosures, and dead infants are thrown into the river. The only places where jute is steeped to an extent likely to cause sickness are the hollows in Nondu. General health was better than last year, except in a few villages. It is said that the people of this thana are deserting their houses owing to the hardships caused by the innudations and scarcity of food, the harvest of the past three years having been very deficient. MEHERPUR thana.—This thana is situated on a low level. Portions of it lie below the high water level of its rivers Bhyrub,

Khoria and Howli. It is consequently subject to inundation. Dwellings and Domestic cleansing.—In general the houses are constructed of the usual materials; but those on the borders of the rivers are built of frail and inflammable materials. Jungle abounds in many villages, but some of those lying along the Bhyrub have been cleared of it by the indigo planters. Domestic cleaning is somewhat better cared for than is generally the case. The sweepings and refuse are utilised in filling up hollows in the homesteads, and consequently unhealthy excavations are contparatively few in this thana, but some of the hollows are overhung with bamboos. The habits of the people are determined by their caste and the occupation they follow, but the Malas are filthy, and the gowalla bustees in Jhowberia and Subadpur are very unclean. Deforcation along the banks of the Bhyrub and on the village pathways and public roads is very common, particularly in Dariapur; but here cattle dung Roads and Drainage.—There are very few village and litter are used as fuel. roads, and pathways are also wanting in many villages. Some of the public roads require repairs and are destitute of trees. The sudder road from Monohurpur is very low at Manakhali near the Ferry Ghât, and therefore not safe for cart traffic. The natural drainage is pretty free, and its outfall is to the Bhyrub and Khoria rivers; but many villages get water-logged during the rains. Water-supply is had from the Bhyrub, Howli and Khoria rivers, and from bhils, khals and dobas. There are very few tanks. The Bhyrub is covered with dam, patikochori, patashavli and other vegetation. Nevertheless its water is clean and wholesome. Its current is, however, not free, and this can be remedied by opening up its junction with the Khoria river at Kuchnidanga, and also the other end to the Howli river below Shubulpur, by which means, it is said, it can be kept free of vegetable and other impurities. bhils are polluted by bathing and washing of cattle. Defectation is carried on on the banks of the Kajli khal. Many villages suffer for want of water during the rains. Disposal of the dead.—The pauper dead are cast into the Bhyrub river, and dead cattle are thrown on waste land. There is very little Jute-steeping in this thana, and it is gratifying to find that this practice in the Bhyrub river has been stopped by the police since the last two years. General health—Fever was considerably less, but cholera prevailed severely in several villages. It is noted that in some parts of the district, particularly at Chandbil, the people have deserted their homes owing to scarcity of food supplies. GANGNI thana is situated on raised ground, and is consequently not subject to much flooding generally. Dwellings and Domestic cleansing.—The houses are not crowded together, but are deficient, as elsewhere, in internal ventilation. Their floors, which as well as the walls are leeped with earth, are damp. Jungle exists in the villages along the Bhyrub river, and bamboo clumps are rare, except in village Kutubpur, where they Hollows and excavations are few. All the other arrangements under this head are the same as in Mehorpore. Roads and Drainage.—Roads are much wanted in this thana, and the existing ones have not been repaired. The natural drainage, which is into the Bhyrub river and a jole, is pretty free; but some villages are water-logged. Water-supply.—The rivers Bhyrub, Itchamutti and Howli, dobas and tanks form the sources. In Gouraberia a hollow near the bazar and the zemindari kutchurry has been enlarged into a tank. are very few and are polluted in many ways. The Bhyrub and Itchamutti have silted up to a great extent, and the banks of the former are used as a public latrine, particularly in Kathuli. In the hot season, when water is scarce, people dig for it into the dry bed of the bhils, particularly in Radhagobindpur and Burra Ramchandpur. Disposal of the dead .- The same as in Meherpur. General health.—On the whole, good. This thana is markedly free from malaria in comparison with the other thanas. Rice was plentiful after three years' scarcity. Karimpur thana is situated on a low level and subject to much flooding. Dwellings and Domestic cleansing.—Same as in Meherpur, but it is comparatively free from jungle. Water-supply is obtained chiefly from the Bhyrub, the Hognagun khal, the Dhankhali bhil, which is the tail end of Bhyrub, the Chakla bhil and joles. Tanks and wells are very rare. The bhils and khals have silted up, and are covered with vegetation, and the joles are filthy. In some villages much water difficulty is felt. General health.—Malarious fever prevailed to a greater extent than in Gangni, but with abated severity in comparison

with its incidence during the preceding year—the result of the inundations. Tenatra than is situated on high ground. The soil is impregnated with alkaline salts from which saltpetre is extracted, which is mostly done in Shalmari. Dwellings and Domestic cleansing.—The houses are built on raised ground. Domestic cleansing is determined by the caste and habits of the people. are many hollows and ditches surrounded with bamboos, and several of them con-The bustis generally and the road from Nandanpur to Shalmari were similarly defiled, and in the latter village bones and skeletons of cattle were seen. Some of the hollows swarmed with infusoria. Roads and Drainage.—Roads are a desideratum in this thana, and even the large village Shalmari has no road. The natural drainage is good. Water-supply.—This is taken from the Bhytub and Khoria rivers and the Peerpur and Abrah bhils. Wells are few and are. The bhils dry up in spring. The water in hollows is also Kushtea thana.—This is a small thana consisting of 22 villages. tanks rare. It is situated on comparatively high ground, and is not affected by floods. It contains no marshes or jungle, but bamboos are plentiful. The soil is partly alluvial and partly clay and permeable to water, and the thana is free from humidity. There are some chur villages in it. Dwellings and Domestic cleansing.—The houses are unventilated, and their floors are damp, particularly of those situated along the Pudma river. The Mussulman villages are unclean, domestic cleansing not being observed. The cattle sheds are filthy. Roads and Drainage.—There are only two public roads in the thana, and none in any villago. The drainage is free, with the outfall into the Gorai river and Champigachi bhil. Water-supply is had from the rivers Pudma and Gorai and the Kalikangni doba which opens from the Gorai. There are a few wells, but no tanks. The doba is polluted by cattle bathing, and dries up in summer. The rivers contain good water throughout the year. Disposal of the dead -The Hindus cremate on the banks of the Pudma, but the Mahomedans bury in their dwelling-houses. The casting of the pauper dead into the river has been stopped. General health was good throughout the year. Kumarkhali thana is situated on comparatively low ground, and is much flooded every year by the overflow of the Gorai and Pudma, particularly the extensive tract of land on the north of the Eastern Bengal Railway line. No embankment is proof against the torrents of the latter river. The Faridpur district lies on its east and the Jessore district on the south. Bamboo jungles are to be seen in The climate is moist, and the soil is for the most part alluvial and permeable to water. There are a few chur villages in this thana. Dwellings and Domestic cleansing.—The houses are thinly scattered. All the other arrangements under this head are the same as in the Kushtea thana, excepting that the floors of the houses are more domp, and domestic cleansing less cared for. Roads and Drainage.—There are four roads in this thana, of which the one along the Pudma, leading to the Pubna district, has been breached by the floods at Balkia, where a pucca bridge is now being constructed. In many villages thoroughfares are wanting. The natural drainage is defective, the ground slope towards the rivers being insufficient. There are no side-drains to the roads, and several villages are water-logged. No water stagnates in the chur villages. Water-supply is had from the rivers Pudma and Gorai and from bhils, dobas and Tanks are rare. The doba at Degul Hât has been rendered abominably filthy from cattle washings, placing of twigs of trees and plants in it for fishing, fluid refuse and other pollutions. Disposal of the dead.—The same as in the Kushtea thana. Jute-steeping is extensively carried on in this thana, particularly in villages Kamalapore, Narainpore, Akliarpore, Khakarbari, and Puddobila. Bhils and hollows are used for the purpose. Some restrictions have been put on the practice this recent her not allowed. tions have been put on the practice this year by not allowing it to be carried on amidst habitations and in the heart of the villages. General health was better than in the Kushtea thana, and this is ascribed to the effect of the inundations.

203. MUNICIPAL INSPECTIONS.—Nuddea DISTRICT—RANAGHAT Town—Drainage.—The natural drainage of this town is towards the river Churni on the west, the Bashko khal on the north, and the Hangor khal in the south; but its eastern portion is not well drained, and to remedy this a scheme of drainage with an outfall towards the water-courses is under consideration. Its soil consists of a mixture of clay and sand, retentive of moisture to a certain

Water-supply.—This is taken from the rivers, khais, three municipal tanks and four private ones, and from wells. The private tanks have silted up and are polluted in many ways, and one of them is covered with pana and rank The municipal tanks receive surface drainage of the surrounding ground through pucca drains. Conservancy.—There are no public latrines, and the river and khal sides are resorted to for defectation. The Barabazar is kept in a very unclean condition, and cow-house refuse obstructs its drains. BEERNUGGAR or Woola is a rural town now considerably reduced in population owing to the prevalence of malarious fever in it from 1857. Water-supply is obtained from the Baromeshia and Banchurah khals, the Mathura and Dahatia bhils, and several tanks. Of the tanks, the Nuddea Rajah's dighi is the best, and contains wholesome water, but almost all the rest have silted up, are filthy with refuse, weeds and rank vegetation, and surrounded by jungle. Six of these have, however, been reclaimed recently, and the Moyrapukar tank, a disputed property, is about to be taken up by the Municipality on account of its "abominably" insanitary condition. *Domestic cleansing*.—The town abounds in dense jungle, particularly at Mustaphipara, where wolves and wild boars have taken lodgement. Its notoriously malarious condition for about the last 30 years is attributed to the jungles. There are no public latrines, and the ditches and fields are resorted to for defectation. Disposal of the dead.—Dead cattle are thrown on waste lands and gardens, and no arrangement exists for the disposal of the pauper dead. Drainage.—This is very defective. The existing drainage discharges into the hollows and tanks in the town. This town spent the money allotted for roads on education, and the Assistant Surgeon is correct in observing that "the saving of lives is more important than the advancement of learning." Chagdan was created a Municipality only in July 1886. The outcry is general among most of its inhabitants, the majority of whom consists of day labourers, cultivators, petty dealers and moodis, that its establishment as a Municipality has told severely on their means. The villages comprised in it, which were before, when the main stream of the Ganges river ran through them, in a flourishing state in a commercial point of view, are now in a depressed condition. Water-supply.—This is taken from the Bhagiruthi or Chokrodhowa river, tanks, and the Henria khal. The tanks, one of which, belongs to the Municipality, are polluted with vegetation. There are also two municipal wells. Drainage — There are no drains. The town is subject to much flooding, and several parts of it are water-logged. Roads.-There is one pucca road from the Railway station to the Municipal Office and 18 kutcha ones. Most of these roads are out of repair. Jute-steeping is carried on to a great extent in Palpara. Santipore town is situated on the banks of the river Hughli, and is the largest in the district. It forms an important commercial centre, and is noted principally for the manufacture of cloth. The soil is alluvial and absorbs rain-water. Water-supply is procured from the Bhagiruthi river, the Nejhore and Haripur khals, tanks and wells. The supply from the khals and the wells is, on the whole, bad. All the tanks, excepting one, called the Chorpukur, have deteriorated. When a tank is excavated in this town, the water oozes out before the proper depth has been reached, and consequently the tanks are shallow and soon become polluted. Chorpukur tank, formerly a notoriously bad one, has been re-excavated and thoroughly reclaimed, its sides raised, a protective railing put up, and it has been reserved for drinking purposes. The Talpukur tank at Notunhatpara in the gurh portion of the town is fit for no use, and its sides are freely resorted to for defeccation. Dead cattle are generally thrown into the khals. Drainage.— The natural drainage is towards the Ganges or Bhagiruthi on the south, and the Nejhore khal on the west. There is no systematic drainage yet, but a pucca drain has been constructed from Gabhagar road at Dariorapara to Barabagar. It discharges now into the Kanapukur, but it is intended to carry the outlet to the river when a complete drainage scheme is taken in hand. To protect the town from the floods of the Ganges, the strand road requires to be raised and provided with a sluice which will also serve as an outlet for rain water. Conservancy.—The arrangements under this head are very bad. There are no public latrines. The well-to-do have well-privies, some of which are full to the brim. The generality of the people resort for defocation to the fields, gardens, waste lands, sides of tanks and khals, &c. Disposal of the

ilead.—About 24 bigahs of land have been purchased by the Municipality at the north-east corner of the town for the interment of the Mahomedan and Christian dead, and the pauper dead are cremated on the river-side by the Municipality. General health.—It was noticed that the inundations of 1885 had the effect of abating the prevalent fever considerably and of improving health generally. Cholera was present from the 15th November to the 25th December, principally in the gurh portion of the town. Novadivira town is a regular islet, bounded on the east and north by the Ganges, on the west and south by the Polta khal, and on the south-east by the Manipuri khal. It is protected from floods by an embankment around it. This embankment was breached in several places during the great rising of the rivers in 1885, and the expense incurred in repairing the breaches impoverished the Municipality. Novadivipa is renowned for Brahmanical lore, and is inhabited mostly by pundits and Sanskrit scholars who have no other calling, hence the impecuniosity of the town. Conservancy.—This is not properly attended to for want of funds. Refuse and rubbish remain unremoved from the roads for days together. The portion of the town called Koom-Bonishara abounds in jungle, which in some places is very dense. Roads.—These are, with one exception, all kutcha Drainage.—Drains are altogether wanting, and the maintenance of the embankment above referred to absorbs a large amount of the municipal income which might otherwise have been expended on drainage, roads and conservancy. It is suggested to make over the maintenance of this embankment to the zemindar of the town. Water-supply is taken from tanks. Naturally they contain good water, but owing to surface drainage finding its way into them, to deposits of silt, and to improper usage, they have become highly contaminated. Disposal of the dead.—There are two burning ghâts on the banks of the Ganges for the Hindus, and a field at the north of the town for the interment of the Mahameden dead but no expenses and a field at the north of the town for the interment of the Mahomedan dead, but no arrangements exist for the disposal of the pauper dead and dead cattle. Jute is largely steeped in the Pulta khal, and is said to be a source of sickness. General health is stated to have improved by the late inundations. MEHERPORE town is situated on the banks of the Bhyrub river. Conservancy—The town proper is surrounded with jungle, which also exists in other parts, particularly in Shaikpara. No arrangements have been made for surface cleansings, and yet the roads are free from filth, because the inhabitants have been made to throw all the house refuse, &c., into the hollows within their premises. There are no public latrines, but it is proposed to provide two. Defeccation is carried on outside the bustis in gardens, waste lands, and on the banks of the Bhyrub. Water-supply is taken from the Bhyrub, one municipal tank, four or five private tanks, and wells. The municipal tank is surrounded by a raised mound, and a watch is set over it to protect it from pollution that the other tanks are full of decomposing vegetation, and their water is bad. The Bhyrub river is covered with vegetation and fouled in the manner above mentioned. Drainage.—The drains consist of kutcha shallow surface channels, and they are obstructed near houses. Kushtea town is situated on the banks of the river Gorai, and comprises 10 villages. Roads and Drainage are sufficient and in good order. The drainage outfall is into the Gorai river which separates this town from Kumarkhali town. vancy.—The arrangements under this head are not satisfactory. Surface cleansing is not properly attended to. The roads are not properly cleaned, but strict prohibition exists against defiling them by the commission of nuisances. The household sweepings and refuse are either utilized in filling up hollows within the homesteads, or are scattered thinly on private waste lands. is a public latrine constructed on a pucca pavement, without any roof or shed. It contains 10 or 12 compartments, and the accommodation in it for females is separate from that for males. There are also private privies constructed of bamboo machans or wooden posts, which are cleaned daily by the muni-Water-supply is taken from the Gorai river and its old dead Disposal of the dead.—The Hindu dead are cremated on a maidan at the west of the Gorai close to the bazar. There is a fixed burial-place for The pauper dead are buried by the municipal mehters. the Mahomedans.

204. Murshidabad DISTRICT—GENERAL OBSERVATIONS RELATING TO THE DISTRICT AS A WHOLE.—This district is situated on a higher level than that of Nuddea, but much lower than that of Birbhum. It is watered by the rivers.

Bhagiruthi, Pudma, Bhyrub, Jelinghi and Moyurakkhi. Flooding is great, and its degree determines the variations of climate in the district, the fertility or barrenness of its soil, and the populous or deserted condition of its villages. The district is destitute of hills, but is covered in some parts with dense jungle. Its soil varies in different parts, as will be shown hereinafter. Generally it has a brownish tinge, which is apparent from the house floors, which are smeared with it mixed with water. There are a few low-lying marshes. The climate is generally hot and dry, and the atmosphere is charged with aqueous vapours during the rainy season. This district is less affected by malaria than Nuddea, but is more subject to cholera than that district. There are more chur villages here than in any other district in the Metropolitan Circles, and the Pudma and Bhagiruthi cause more landslips than in Nuddea, where they are common. It is gratifying to find that in most villages cowdung is dried and utilized as fuel instead of being accumulated in rotting heaps. Jute is sparingly cultivated, but the cultivation of the mulberry tree for feeding silkworms is very common, and is carried on a greater scale than in Birbhum.

OBSERVATIONS MADE AT EACH THANA IN THE Murshidabad DISTRICT.-Bhugwangola thana is situated on a lower level than the thanas which The soil is alluvial in the deara villages and sandy clay in other surround it. parts, the former preponderating. Jungle and bamboo clumps are few. The embankment in Barathakur gave way during the inundation of 1885, and caused considerable damage to this and the adjoining villages. There are several chur villages in this thana. Dwellings and Domestic cleansing .- The houses are generally built apart from each other, admitting of free perflation While they are constructed of the ordinary materials generally, in the chur villages they consist of mere hovels of mats, reeds and bamboos. Cattle litter and other house refuse are thrown about in the compounds and around the houses, and there are a good many unwholesome hollows which in some places contain feecs. Defeecation on the roads and pathways and on the banks of the Bhyrub is very common, particularly in Akrigunj bazar, where also earthen pots and other rubbish were found lying about. There were no manure pits and heaps in Dangopara, Bazitpur, Baraberia, and Khudapara; but in the last-named village, and also in Mahomedpur, bones and Khudapara; but in the last-named village, and also in Manomedpur, bones and skeletons of cattle were found lying on waste lands. This was also the case on the Maricha road. Roads and Drainage.—Roads are insufficient in many large villages, and in many the pathways are low and require raising Trees are required to be planted on the Akrigunj road. The natural drainage is defective, and artificial drains are greatly wanted. Many villages are water-logged. Water-supply is obtained from the rivers Pudma, Bhyrub and Bhagiruthi, the Churkati nulla, the Barathakur and Kesaipore khals, the Nara integral tooks and walks. The Bhyrub becomes almost dry in the hot season jole, and tanks and wells. The Bhyrub becomes almost dry in the hot season at Khoribora, and animalcules were found in the remaining decomposing water. The tanks are covered with rotting vegetation, and some of them are beset with jungle. The water of some of the wells becomes brackish in summer. Difficulty is felt for water in the villages along the Bhagiruthi river, excepting on its "rash" side, and in Durgapore, Bhawanipore, Khadapara and Mowakhana. In the last-named village the people dig the sandy soil to supply this want. Disposal of the dead.—The Hindus burn their dead on the banks of the Bhyrub and Bhagiruthi rivers; but there is no fixed place for the interment of the Mahomedan dead, nor any arrangements with regard to the pauper dead. steeping is largely carried on in the offshoot of the Barathakur khal below Baraberia, and in hollows in Shibnagar and Bhawanipore. Hemp also is cultivated in several villages. These processes are said to increase the prevalence of sickness. General health.—Village Dangapara suffered very severely from fever, and cholera appeared in severe form in Baraberia, its probable cause being put down to the use of water polluted by the washing of cattle in it. The general prevalence of cholcra and bowel-complaints in the district is referred to water contaminated by filthy washings, plant-steeping for catching fish, and defeccation along the banks of the Bhyrub. Asanpore than a is limited in extent, and is more subject to flooding by the Bhagiruthi than the thanas on the other side of that river. With few exceptions, jungle and bamboo clumps are rare in it, but there is a swamp in Sundarbagh. There are only two churs of alluvial formation in this thana. Dwellings and Domestic cleansing.—The huts

or hovels which compose the dwellings in this thana are situated apart from each other, separated by waste lands or lands teeming with rank vegetation. Manure heaps are to be seen on the main pathways in Mahipur. Roads and Drainage.—This thana is better provided with roads, but they have no side-drains, and those along the Bhagiruthi were ankle deep in dust. Water-supply is had from the Bhagiruthi river, a bhil, and a few tanks. The bhil water has deteriorated and become discoloured. There is a good tank, containing wholesome water, in Sundarbagh, but the tank in Chhowai is overgrown with vegetation, and its water is muddy. The inhabitants of Lalkati suffer much from want of water. Disposal of the dead.—The Hindus cremate on the banks of the Bhagiruthi. In other respects the arrangements under this head are the same as in Bhagwangola. Shahanagar thana.—Dwellings and Domestic cleansing — The houses are of the ordinary description. They are open to perflation of air, and free from jungle. Defectation on the banks of the Gobra nulla is very common. The other arrangements under this head are the same as in Bhagwangola. Roads and Drainage are better looked after here than in the other thanas. Besides the City Murshidabad road, there are one pucca and three or four kutcha roads. The drainage is pretty free, and its outfall is into the Bhagiruthi. Water-supply is taken from the Bhagiruthi river, the Gobra nulla, and wells. There are no tanks. The water in both the water-courses is wholesome. General health was somewhat impaired by fever, which was conspicuously fatal in Prosadpur owing to the jungle it contains. Doulatbazar than lies along the Bhagiruthi river opposite to the two thanas of Gorabazar and Sujaganj. It is situated on somewhat high ground, and is little affected by floods. The soil consists of soft clay mixed with sand. Excepting in two or three villages, there is no jungle to be met with. Dwellings and Domestic cleansing.—The houses are constructed in the usual manner, but some of them have tatee walls, and they are arranged in long lines instead of in the usual groups. Defectation takes place on the banks of the Bhyrub, in gardens and on pathways, and about the dwellings in villages Nidhinagar and Chowghori. Hollows, containing dung, ashes, decaying vegetation and stagnant water are to be met with. The habits of the people in Basuntapore are particularly unclean. Dead cattle are thrown on waste lands. In general, cowdung is utilized as fuel. Roads and Drainage.—There are three principal roads in this thana, but many villages want thoroughfares. Drainage is pretty free. A little water logging takes place in Shusabad. Water-supply is obtained from the Bhagiruthi and Bhyrub rivers, and from bhils, khals and wells. In many villages there are wells only; tanks are rare. General health was good on the whole, but there was much fever in Basuntapur, Gharipur, and cholera appeared in Kallianpur. There are four lime kilns in the bustis in a langer which are considered prejudicial to health. Goas thana is situated on a higher level than the adjoining thanas, and is less subject to flooding. The soil consists of poli mati in the deara villages of Nyamatpara, Lakminarainpur, Ramnagar and Patibona, and permeable sandy clay in the other parts. The thana abounds in jungle in which wild beasts lodge, and bamboo clumps are plentiful in Jhorarpara and Chokorepara. Dwellings and Domestic cleansing.—The houses are mostly made up of mats, reeds, bamboos and grass. Mud-walled houses are rare. They are scattered and apart from each other, and are inhabited by small numbers of persons. Domestic cleansing is not generally observed. Unwholelines instead of in the usual groups. Defectation takes place on the banks of the numbers of persons. Domestic cleansing is not generally observed. Unwholesome hollows and ditches, heaps of manure and sweepings, bones and skeletons of cattle on the waysides, ashes and litter about houses, and defocation on the banks of the water courses, are common. In some villages cowdung is dried and used as fuel. Roads and Drainage—There are several public goads in this thana, but they are unprovided with trees for shade. The Bansgaria and Nyamatpara road gets water-logged, and the road along village Chardup was breached by the floods of 1885, and the part where its culvert was, has been converted into a doba. The drainage is defective, water stagnates in many villages to a good depth, and the road outside of Chokorepara has obstructed the drainage of that village. Water-supply is taken from the rivers Pudma, Bhagiruthi and Bhyrub, and from khals, joles, bhils and wells. There are very few tanks. The khals, bhils, &c., along the portion of the Bhagiruthi within this thana silt and dry up in spring, which

creates great water difficulty. This contingency does not occur in the opposite or "rash" side of this river. The old bed of the Bhyrub has silted up and becomes quite dry in the hot season, and then much distress is experienced for want of water. The Shiabmari khal is polluted by filthy washings and bathing of cattle in it. Wells cannot be sunk in the chur villages. The damush between Patibaria and Gunripara requires to be reclaimed urgently. The hollows in Chandpur, from which water is taken, are full of animalcules, and the tank in the same village is beset with jungle, and its banks used for defectation. The tank in Purundarpur is surrounded with dense bamboo clumps. The doba along the roadside near Chandpur is defiled by bathing of cattle and the various modes of fishing carried on in it. Generally during times of scarcity people obtain water by digging into the sandy beds of khals and bhils. Jute-steeping is carried on in the jole in Malin, in the hollows in Dulhutpur and Sonatollah, in the bhil in Damudarpore, in the bed of the old Bhyrub river at Kesubpore and Noodapara, and in the tanks in Chokorepara. General health was good on the whole. Kallianganj than is situated on somewhat elevated ground. Its soil consists of permeable sandy clay, and its villages are open and ground. Its soil consists of permeable sandy clay, and its villages are open and airy. It is comparatively free from jungle, but numerous bamboo clumps are to be seen in villages Palshi and Gurey. Dwellings and Domestic cleansing.— Generally the conservancy is fair, but pits of cowdung and manure and cesspools were seen smidst habitations in Kamphole, Mominabad, Itacharun, and Dhingur. Roads and Drainage.—Roads are insufficient, but two are under construction. One of these, the road from Itacharun to Shingur, has been three years on hand. The road from Nerogram to Kallianganj has been breached by the floods causing a wide gap half a mile in extent. The drainage is good. There is no water-logging worth notice. Water-supply is obtained generally from bhils and tanks. Defectation is freely carried on on the banks of tanks. The Bachia bhil, the largest and most important one in the thana, is covered with vegetation, and dries up in the hot season. General health was good. RACHUNATHGANJ thana.—The villages are generally open and airy, but jungle exists in the villages along the river Bhagiruthi and camboo clumps are few. The soil is alluvial in some parts and clayey in others. Most of the villages are subject to flooding, and village Radhanagar has been entirely engulphed by the encroachment of the river Bhagiruthi. There are some silk factories in Barachimul. Dwellings and Domestic cleansing.—In construction the dwellings are the same as those in thana Kallianganj. The conservancy is bad. The banks of the rivers and the pathways are resorted to for defocation; there are unhealthy hollows amidst habitations, and the bones of cattle are to be met with on waste lands and in gardens. In some villages cowdung is utilised as fuel, while in others there are manure pits in the front of houses. Reads and Drainage.—Thoroughfares are wanting in many large villages. Water-logging is not very common. Water-supply is taken from the existing Bhagiruthi river and its old bed, and from the Shahesh and Aganga bhils. Tanks are few and generally polluted. There is however, one good tank in Barachimul, and a hollow in Farilpur has been enlarged Water difficulty is experienced during the dry season. Disposal into a tank. of the dead.—In Senkundra the dead are cast into the river Bhagiruthi by some Hindu-families who are prejudiced against cremation. In some villages, places for the burial of the Mahomedan dead have been fixed, but in the majority of them this has not been done. Jute-steeping takes place in hollows in Barachimul and in the bhil in Teghori. General health was good on the whole. Measles appeared in Teghori and Kalabagh. Dewanseral thana is situated on clevated ground, and is little affected by floods. The soil is sandy clay in some parts and polimati in others, and it is not damp. The thana is comparatively free from jungle and bamboo clumps. There are a few chur villages in it. Dwellings and Domestic cleansing.—The houses are much the same in point of construction, situation, &c., as in Raghunathganj thana. It was noticed that defectation was very common in hollows; that the gowala bustis were very filthy; that there were decomposing cattle dung pits in Sreemantapur and Belitunga; and that the gardens in Bonapara were, covered with kachhini shells and human fœces. *Prainage*.—Rain water is pretty well drained into the Bhyrub river through joles, but at Sreemantapur the drainage is bad. *Water supply* is obtained from the river, the bhil, 3 dighis

(tanks), joles and wells. The Bhyrub, the only water-course in the thana, is deep and flows throughout the year, in contradistinction to its condition in other thanas; but it is covered with dam, moss, &c., and filthy washings in it, and defectation on its banks are freely carried on. The Rajah's dighi in Sreemantapur is in good condition and guarded against pollution. A tank which was excavated and fenced in Rangaria some three tanks are freely carried on the same and fenced in Rangaria some three tanks. and fenced in Bansgaria some three years ago contains good water. cannot be sunk in the deara villages, or where the soil is too sandy. Difficulty is felt in obtaining water during the hot months, when the people dig into the beds of the water channels and receptacles to meet the want. Jute steeping is largely carried on in the joles in Bonebaria and Balarampur. General health was very good. This thana is said to be free from malaria, as there is no humidity of soik, and the air is dry and bracing. Measles appeared in Futeypur and its neighbourhood. Suri thana is situated on a somewhat low level, and is subject to flooding. Its soil is the same as that of thana Dewanserai; bamboo clumps are common; and there are a few chur villages in it. Dwellings and Domestic cleansing.—The houses are scattered, and none of them are mud-The other arrangements under this head are much the same as in thana Raghunathganj. Roads and Drainage.—There are very few roads, and they are devoid of side-drains and trees for shade. The drainage is towards the Bhagiruthi and Pugla rivers. The Mambazar road gets very much water-logged. Water-supply is from the Bhagiruthi river, the Pugla and Baston nuddis, tanks, and a few wells. Defection is common on the sides of these water-courses and water receptacles. Disposal of the dead - The pauper dead are believed to be thrown into the Bhagiruthi river, particularly in Kalliganj. Jute is steeped largely in Panka, Chandrapara, Chokhatpur, Dharampur, Rinapur and Kalliganj, it is said, to the prejudice of health. General health was good. Cases of measles occurred at Rinapur and Bhagwara. BHARUTPUR thana is situated on the bank of the Bhagiruthi, and is flooded by it considerably, and the soil is much like that of thana Raghunathganj. Dwellings and Domestic cleansing.—The houses are devoid of ventilation, and those in Duttabelia are too close to each other to admit of free circulation of air. The Moochees, Haris and Mussulmans are indifferent to domestic cleansing. feecation on the pathways, about dwellings, on waste lands, and on the banks of the rivers and tanks is common. The offal of slaughtered cattle are thrown about the dwellings of the butchers. Roads and Drainage.—The roads are defective, and drainage not quite free, and there is much water-logging in the roads and passages generally. Water-supply.—The chief sources are the Bhagiruthi river, the Baroar bhil and the tanks. The river and tanks are defiled in the manner above stated, and tanks are mostly in a bad state, the tanks in Salar excepted. Disposal of the dead.—Contrary to the general custom, the pauper dead are in this thana, but there exist no arrangements for the disposal of dead cattle. General health.—With some exceptional cases of fever and cholera, the general health was good. Khurgram thana —This thana is subject to floods generally by the overflow of the hill stream Moyurakkhi. The soil is bad, consisting of a mixture of rock dust, poli-mati and clay impregnated with lime stones, thus exhibiting a marked difference as compared with the soil of the other thanas, result is that trees and vegetation are rare, and fruit trees are absent. Limestones are plentiful on the banks of Mooraye nuddi. There are very few bhils and khals and, excepting in Rajpur and Harinarainpur, the thana is free from jungle. During the flooding this year the Shudal embankment gave way, causing danger to several villages. Domestic cleansing is somewhat observed here. There are foul ditches and holes in Rajpur, manure pits in Dhumalpur, and cattle bones on the fields in Jabuni. Roads and Drainage.—The villages are deficient in roads. The public road along the river Moyurakkhi is being encroached upon by that river is tolerably drained into the same river and into the Patun khal. Village Jabuni is much water-logged, and the Khurgram road obstructs the drainage from the ditch in Manshubpur. Water-supply.—This is obtained from the river abovementioned, the Monaye nuddi, the Patun and Kumray bhils, and from tanks. Many of the tanks require reclamation; most of them are overgrown with vegetation, and a few have silted up. Defectation and filthy washings also take place in many tanks. There are many tanks in Balia, of which

only two are fit for drinking purposes. The Madubpukur tank in Manshubpur and the tanks in Goosi contain good water. The river is fouled by defeccation. Disposal of the dead — The pauper dead are buried in some villages by public subscription. General health was good, excepting that cholera appeared in a few villages; but the flooding and bad soil above described cause great distress to the peeple. Gokurna thana is situated on a little higher level than Khurgram, and there is little or no flooding. The soil consists of a mixture of hard clay and sand associated with limestone. Excepting the river Dwarka, there are very few water channels in this thana. There is a marsh in front of village Kashbashpur. Dwellings and Domestic cleansing.—The houses in Mohabundi are crowded together, precluding free perflation of air. The habits of the Mussulmans, who form the bulk of the population of this thana, are very filthy; hence domestic cleansing is neglected by them. Defeccation on the roads and village passages is common, particularly in Kashbashpur and Mohabundi. Manure heaps and pits are to be met with in Kashbashpur. Drainage.—The drainage is pretty free, but soakage of water in the roads is general. Water-supply is taken from bhils and tanks. The water of the Dwarka river is not much used owing to its being muddy. Defeccation on the slopes and banks of tanks is frequent. There are two protected good tanks containing whole-

some water in village Gokurna. General health was good on the whole.

206. Birbhum District.—General description and sanitary conditions of the district as a whole.—This district is open, elevated, dry, hilly and entirely free from jungle and forest, excepting in thanas Moureswar, Dubrajpur and Rajnuggar, which abound in sâl jungle. It is much more elevated than the two neighbouring districts of Burdwan and Murshidabad, and from its elevated position, it is less liable to inundations generally, although the hill streams swell during the rainy season and submerge some portions of it. The most hilly portions are the Nalhati and Dubrajpur thanas. The principal rivers are the Ajai, Moyurakkhi, tributaries of the Bhagiruthi and Balkeswar rivers, respectively. There are other minor streams, such as the Bans and Pugla nuddis in thana Moureswar and the Balkiswar nuddi in thana Bolpur. Its towns are Suri, which is the Sudder station; Rajnuggar, where there are the remains of the walls which were constructed for protection against the inroads of the Maharattas; Dubrajpur, a commercial town; Nulhati, a well-known mart by the side of the East Indian Railway loop line; and Ramporchat, the head quarters of the subdivision of the The soil consists of dense marl intermixed with particles of stone and limestone in some parts, and of rocky formations in other parts. The upper strata consists of hard clay impregnated with limestone, or of sandy importmeable clay uniformly mixed with rocky particles. This soil is particularly suited for the cultivation of sugarcane, potato and other tubers, and the mulberry tree for feeding silkworms for the rearing of cocoons from which the silkcloth, for which this district is famous, is manufactured. As the soil absorbs the surface water to a good extent, the district is free from ground moisture. Barren waste lands are to be met with in thanas Bolpur and Moureswar. Dwellings and Domestic cleansing.—The houses are mud-walled in some places and made of mats, bamboos, straw or other grass in others, with thatched roofs generally, and they are all ill-ventilated. The habits of the people are determined by the occupations they follow, or the caste they belong to. House sweepings, cow-house and other litter, and other refuse lie about or are accumulated in the midst of habitations, on roads, on the passages, on waste lands, or in hollows, and the gowala bustis are disgustingly filthy. cow-houses are undrained, and the fluid house refuse runs into the nearest hollows. Conservancy is as sadly neglected as in the Nuddea and Murshidabad districts, but promiscuous defœcation is not so general as in them. In some villages cattle-dung is stored in pits for manure, where it festers and rots. Offal of slaughtered cattle are thrown in front of dwellings. In thana Bolpur, spirituous liquors are more largely consumed than in the other thanas, and the drunkards commit nuisances in the bustis. Roads.—
This district is better provided with public roads than Murshidabad and, owing to the dryness of the soil, village roads are not so much wanted. The road from Scynthia to Shathalsha is thick in dust and sand during the dry season, and deep in mud during the rains. The pucca road from Suri to Dubrajpur is devoid of trees for shade, and the kutcha road from Panrui to Bolepur, on which traffic is great, is below the level of the paddy-fields on both its sides, and becomes muddy during the rains. There is a breach at Pakhna on the sudder road, caused by the culvert having been carried off. Drainage.—The natural drainage is good, the surface water either flowing into the water-courses or soaking into the soil, and consequently does not stagnate or cover any large extent of surface. Water-supply.—This is taken from the rivers, nullas. kandus, brobks, tanks and large hollows. The tanks naturally contain good water. A few of them have their margins sufficiently raised to obviate the flow of surface drainage into them; but many are open to contamination, and none have been exclusively reserved for drinking purposes. Defeccation is the chief source of pollution of tanks as well as of kandus. Some of the tanks in thana Shakalipur require reclamation. Dead infants are occasionally thrown into the rivers and brooks. In thana Bolpur, owing to the water-courses running through the paddy-fields, irrigation is greatly promoted, and consequently the harvest is excellent. Jute is not cultivated in this district. General health.—There was not much fever on the whole this year, but it was observed that thana Bolpur and village Bikpara in thana Nulhati have been depopulated—the former by fever of three years' standing, and the latter by repeated outbreaks of cholera during the past ten years. The cholera of this year, which prevailed in almost every thana in the district, was sporadic in character.

The Deputy Superintendent has not furnished the results of his sanitary inspections in each thana in this district as he has done with regard to

Nuddea and Murshidabad.

207. Assistant Surgeon Jaclub Chunder Ghose, Rai Bahadoor, Deputy Superintend-

Bariepore 16 Bistopur 1 Bistopur 1 Bankipore 1 Bankipore 1 Bankipore 1 Bistopur Bankipore 1 Bistopur Bankipore 1 Bistopur Bankipore 1 Gloghat Gloghat	2 1
Total 18 Ulooberia 2 Total Dunijor 30 Jagatbullabpore 7 Total 39 Ranigunge Assensolo Satgachia Montossur Kutwa	23 26 30 86

ent of Vaccination, 3rd Metropolitan Circle.—This officer inspected, for sanitary purposes, 10 Municipalities and 232 villages situated in the thanas in the districts named in the margin. His work is less than that of the other Deputy Superintendents, and it is noticed that in some thanas only 1 to 4 villlages were visited; but it should be noted that he officiated for his Superintendent from the 7th July to the 24th November, while the latter was away on deputation duty. During the period he officiated, he inspected one town and seven villages in Birbhum, 24-Pergunnalis, Scram-

pore and Howrah. His report, an abstract from which is subjoined, contains some valuable information, but it treats of the districts as wholes, and is somewhat meagre, and cannot therefore be of practical use in relation to each than a

inspected.

villages is bad Conservancy as denoted by the want of privies and latrines, and the consequent necessity of defecating on the sides of foot-paths, specially during the paddy-sowing season when fields are not available for the purpose of obeying calls of nature. The stench of the feecal matter thus exposed becomes at times intolerable. The cattle make matters still worse by treading on the feeces, and thus scattering it and besmearing the paths with it. In the Burdwan district defecating on the side of tanks is common. In some places the pigs act as scavangers by devouring the excreta, but their own droppings not only ro establish the evil, but also add to it by their disgusting odour.

209. The next point, and which is of no less importance, is bad Water-supply.

The next point, and which is of no less importance, is bad Water-supply. The tanks in all four districts under observation are indiscriminately, used for drinking, ablution and other purposes. In **Burdwan** the women, before entering the water for their bath, anoint their bodies with oil and turmeric—an abominable and disgusting practice. These ingredients with the secretions of the skin is thus mixed with the drinking water. Again, cattle and dogs also

lave themselves in the tanks during the hot weather. In the 24-Pergunnahs, which is close to the Metropolis and its Suburbs, bad water is drank in almost all villages, particularly in thana BISTOPUR where the low people use bada water, or water of the swamps. • In thana Ulooberia in Howrah, although the canal water is largely used by the people in its immediate vicinity, there are others, particularly the low class people, who freely use the water of deep pits dug out to procure earth for building and other purposes, the water of which is extremely unwholesome and disgusting, particularly during the dry season, when it is covered with a thick scum of "variegated colour," the look simply of which is abhorrent.

210. The third condition demanding attention is Jule-steeping and Shell-lime manufacturing. Jute-steeping is carried on in the eastern parts of thanas Singoor and Chanditolla in Hughli, in a swamp named Dankuni, to which allusion will be again made under the head of "Malaria." During the months of August and September, the process, combined with the heat prevalent during those months, becomes a source of unhealthiness. The shell-lime manufacturing is carried on in thana Ulooberia. Heaps of shells of the species Brachiapodic Mollusk, commonly called Shamook in the vernacular, are exposed to the sun's rays to be dried prior to being burned in a kiln. The vapour emitted by the burning shells is suffocating and intolerable, and the stench arising during the drying process contaminates the air to the detriment of health. The Bagdis, who generally carry on the manufacture, escape with impunity, owing, no doubt, to their constitutions being habituated to the bad results of the processes.

211. Another source of unhealthiness is malaria. This malaria is associated with rainfall, with the artificial and natural drainage of the country in the shape of rivers, khals, bhils, and with ground inequalities. Thanas JEHANABAD, Godhat, Khanacool, Singoor and Chanditolla, in Hughli, the villages north of Katugram and the Dainhat Municipality in **Burdwan**, suffer from the above cause more or less from time to time, and may properly be considered the home of malaria. Thanas Jehanabad, Goghat and Khanacool are watered by two large streams, the Damudar and Bulkessur, which overflow during the rains. These thanas are therefore protected from the flooding by bunds (embankments). The ground inequalities in them are markedly slight; they are intersected by numerous khals and rivulets; and they contain bhils or The bunds, though they protect the villages from being submerged, exercise an evil influence by impeding the free drainage of rain-water which consequently accumulates in the fields and bhils, there being no contrivances for the discharge of the surplus water when the rivers fall. The soil remaining for a long time under water becomes malarious, and hence epidemic fever prevails during the drying-up process. The Singoor and Chanditolla thanas are affected by an extensive swamp (Dankuni julla) in proximity to them. A khal has been excavated of late to drain this swamp, which has succeeded in reclaiming large portions of land from the julla, and has consequently benefitted the people of the locality by generally reducing the generation of malaria. The villages north of thana Katugram are flooded during the rains by the overflow of the Ojai river. They are low-lying, and there are no drains to carry off the accumulated water: hence the unhealthiness which prevails in these villages. The source of the unhealthiness of the Dainhat Municipality is traced to the insanitary conditions obtaining in a low chur land, in its immediate vicinity, extending over a few square miles. During the rains this chur is submerged, and the indigo and other crops, grass, &c., rot by remaining long under water, and become a source of malaria and danger to the Municipality. This year the rainfall was abundant, and the lands were therefore submerged early and drained late. The consequence was that the Municipality suffered more from fever than during other years. It is generally believed by those who have had experience in the matter that a normal rainfall is conducive to health and comfort, and that the extremes either way cause sickness. A scanty rainfall is considered a general calamity, as the impurities of the soil are not properly washed off and carried away, and the heat is persistently great—and that thus malaria is generated and produces fever of a virulent type. On the other hand, abundant rainfall is considered a partial axil for the the influence of realerie is arread to places which are a partial evil, for then the influence of malaria is spread to places which are not drained properly after remaining under water for some time.

offered them with indifference. They are probably not aware that in the most ancient historical record, the Mahablasta, the saving of Vishna to Yudismost ancient historical record, the Mahabland, the saying of Vishna to Yudisthira, 'Authira,' inculcates that proper conduct consists of not received in the immediate vicinity of roads or foot-paths, in rice-fields
with standing crops, or in immediate proximity to water, near chattalpather
or where people assemble to discuss on science interature religion, &c. Many
villages complain of poverty and want of funds for creeting latrines &c. their
condition being one of extreme wretchedness. But the scality is that they
are apathetic, for if they were to combine, they could under the proper
guidance of their headmen, accomplish by their existing when
exertion the necessary reforms gradually. The people of Ulcoberis, when
called upon to excavate tanks for good drinking water, and to dry the shells
for their lime trade at a distance from their dwellings, objected to do so, on
the ground that their health do not suffer by these conditions. The Deputy
Superintendent explained to them the necessity of being careful, as, although
cholera epidemies do not come on all of a sudden, their health was being
actually undermined by bad air and water, and that under such circumstances
the "bacillus springs up and flourishes," and ultimately carries off thousands. the "bacillus springs up and flourishes," and ultimately carries off thousands. But the greatest difficulty to be contended with is the ignorance of the people, their intelligence " being not far superior to the cattle with which they herd." Another result of ignorance is superstition. In times when epidemics prevail, the people present offerings to their deities instead of exerting themselves to remove the causes of such epidemies. The Deputy Superintendent endeavoured to impress upon them the fact that their weal or woo depended on the observance or neglect of certain natural laws; that the fact of cholera or fever being at their doors indicated that these laws had been neglected; that worshipping or offerings to the deities could not ward off such occurrences; that instead of tasting they should of rve cleanliness; that they should be up and doing, as the work before them was gigantic; that they should accomplish piece-meal and by degrees all that is necessary in the way of providing themselves with good drinking water tanks; that they should effect by the strength of their own arms the filling up of the filthy pits in the immediate vicinity of their dwellings; that they should erect rationes for defeceation, to obviate resorting to foot-paths and banks of drinking water tanks; that they should remove refuse from cattlesheds and heap them in small quantities at suitable distances from their dwellings; that cholera-infected clothing ought to be buried after disinfecting them; and that the washing of such clothing in tanks ought to be stopped. Suggestions.—The book as Superintendent suggests that drainage and other works in malarious distriction and in the superintendent suggests that drainage and other works in malarious distriction and the superintendent suggests that drainage and other works in malarious distriction. bodies organized for the purpose according to the nature of the work.

South Schuran Town.—This is one of the largest Municipalities in Bengal, being about 36 square miles in extent; but its sanitary condition is not as good as it should be, considering its preximity to Calcutta. Many places in it was highly covered with jungle which is not cleared even once a year; and during its rainy, covered with jungle which is not cleared even once a year; and during its rainy, covered with jungle rots and makes the air unhealthy. The cleanliness of the firms was on this jungle rots and makes the air unhealthy. They are covered with and its some places the frains were not area, toucheds. They are covered with weeds and make road only for, generating regions effluvia, stagnates weeds and make road only for, generating regions us effluvia, stagnates in them. So result was had chosers, more or less visiont in character, broke in the Manicipality, committing great havec in the first of

with lights while the most crying sanitary evils remain unremedied. The Commissioners do not seem to be alive to the responsibility thrown on The Commissioners do not seem to be alive to the responsibility thrown on them. Rairus town has many tanks containing good drinking water, but it has also many others containing foul water which should be re-excavated. The drains are generally cleaned before the rains, but the drainage is capable of much improvement. There are jungles here and there, but they are cleared at stated intervals. The general health was good. Journage town is thickly pepulated, containing mostly well-to-do people. The roads are both pucca and kutom and are in good repair. It has upwards of 20 large tanks containing good drinking water. There are several pucca and health was good. Journal town is also thickly populated and has jungles in several places requiring to be cleared. There are several pucca and kutcha woods which are in good repair; but the drains are far from a satisfactory state. With several in good repair; but the drains are far from a satisfactory state. With several good drinking water tanks there are many foul ones which should be kept clean. The drainage is defective. Health was good. Hughli District.— Utterpara is a model Municipality. The drainage system is all but perfect. The people generally use the water of the Hughli. There are many good drinking water tanks. The conservancy arrangements are satisfactory. Night-soil is buried at a distance from the Municipality. The Chairman of the Municipality takes very deep interest in it, and he thoroughly understands the principles of sanitation. He deserves thanks from the Sanitary Department. The people, hewever, have not yet recognized the value of house sanitation, not even the well-to-do who can afford the expense of reform: for here a pit full of filth is allowed to stand, and there a tank evolves malarious effluvia, and the rich owner of these thinks them to be innocuous, and will not remove them. The health of the people was good. Kothung town.—As there are many brick-fields in this Municipality, the roads are generally metalled with the debris of the brick-kilns. The drainage is not bad, but is capable of much improvement. There are many pits where foul water stagnates and cause the surrounding localities to be unhealthy. They should be filled up or converted into tanks. The Municipal Commissioners complain that they have no power to deal with such nuisances. These powers with the requisite safeguards should be granted to them. There is no municipal tanks, but there are about 20 good private drinking tanks. There are eight coolies and two carts There are no public fatrines. The well-to-do have private for conservancy. privies of their own, which are cleaned by private menters. The arrangements for the disposal of the dead are satisfactory. Health was good. Ihudresar town.— The people use the water of the river Hughli, and there are four good drinking water tanks besides. The drainage is capable of much improvement. Health was good. Baidyabati town.—The people use the water of the river Hughli, and there are six good drinking water tanks. The drainage is far from satisfactory. There are several pits containing accumulations of filthy water which should be filled up. The general health was good. Jehenabad town.—The people generally use the water of the river Darkeswar which flows by the town on the west. The drains are far from satisfactory, and the conservancy arrangements are not sufficient for the purpose. The general health was bad as there was much fever. Bansbaria town stands on the Bhagiruthi river, and the water of that river is used by the people generally. The drains are not in a satisfactory condition, and the conservancy arrangements are insultia very healthy one. Last year malaria broke out within it, and a charitable dispensary had to be established to give relie to the sick poor. There is a char of the Ganges in the north which remains submerged for a part of the year. Between the thur and the main tend them:

Water from which norious emanations at the part of the water the river rose earlier and inundated the case detection. The plants rotting under water healthy and generated malaria. The drains are in pretty good order the people use the water of the bhill as well as that of tanks. Kutwa town—I dispensely arrangements. There are no datrines or privies. The people generally resort to gardens or waste lands for defectation. The drains are had and not kept in good order. These plefects were pointed out to both the cient. Health was good. Burdwan Disreicr-Dainhattown. This town is not

Chairman and the Subdivisional Officer. The general health was very bad; both cholera and fever prevailing seriously. Kulna town.—The people of this town generally use the water of the river Bhagiruthi and also of several tanks, the water of which is not fit for drinking purposes, but still the lower class of people use it. The drains are not in good order. The conservancy arrangements are such as the town can maintain, but they are insufficient for the purpose. There is a bhil on the north and the wind which blows over it to the town during the cold months makes the town unhealthy. The general health was not good. Cholera raged and caused 25 deaths during the three cold months, and there were also several deaths from malarious fever. Howrah DISTRICT.—Bali town stands on the river Hughli. The people generally use the water of this river, and there are also several good drinking water tanks. There are five conservancy carts, four wheel-barrows and twelve coolies for conservancy purposes. The drains are in good order; but there are several pits in which foul water stagnates and makes the place unhealthy. They should be filled up, but the Municipal Commissioners complain that they have no power to deal with such cases. The requisite powers should be given to them. It was noticed that a fair proportion of the municipal income is

expended on sanitation. The general health was good.

GENERAL OBSERVATIONS AND SUGGESTIONS.—Good drainage is a crying necessity in every town and village in Bengal. The drains should be so constructed that they might empty themselves into some main drain. But in almost all the towns and villages which were inspected, there are either no main drains, or the other drains have been so constructed that they do not empty themselves into the main drains. As the carrying out of perfect drainage schemes entails scientific knowledge and skill, the Municipalities cannot be expected to possess such means as will place such knowledge and skill at their disposal. The Deputy Superintendent therefore suggests that the Government should cause a scheme of drainage to be prepared for each town, and that the Municipal Commissioners should be called upon to introduce it gradually, and to report every year the progress they have made in The people still do not understand the subject of sanitation, hence the matter. the marked indifference manifested with regard to it everywhere, even by the Some steps should be taken to popularize this subject. In some Municipalities sanitation is neglected for some such luxury as lighting. Every Municipality should be under the obligation of expending a certain proportion of its income upon sanitary improvements, and this should be enforced by law. The Municipal Commissioners of some Municipalities, such as Bali and Kotrung, complain that they have not the requisite powers to carry out certain improvements, such as filling up of pi & &c. They should be invested with the necessary powers, but with such safeguards as will obviate abuse.

215. Assistant Surgeon Ashutosh Law, Deputy Superintendent of Vaccination, 4th

Midnapore	District.	Bankura District.			
Thanas.	No. of villages.	Thanas,	No. of villages.		
Sabong Midnapore Keshpore Salboni Ghattal Chunderkona Tumluk	20 33 54 5 26 25	Bishenpore	14 11 7 2 13		
Sootahatta Nandigram Egra Contai Canchkura Gurbetta	16 14 8 12 24 19	Total	67		

Metropolitan Circle.—The sanitary inspections of this officer embrace five towns and 324 villages situated in the thanas in the districts cited in the margin. He has limited his report to a detailed account of the sanitary condition of only three thanas in these two districts as typical of the conditions obtaining in the rest inspected by him. His description of these thanas is epitomized below.

216. Midnapore DISTRICT.—MIDNAPORE thana.—The villages in this thana are situated mostly amidst and scattered over paddy-fields.—Dwellings

and Domestic cleansing.—The dwelling-houses are chiefly made of mud-walls with straw-thatched roofs. Their basements, although very low, are dry to a certain extent, but their ventilation is defective, owing to the roofs being not very high, and to absence of windows generally. The observance of domestic cleanliness is almost the same in every village in all the registering circles of this district, the habits of the people influencing and regulating it in every way. This is evidenced by the tendency of the people to follow

their fellow-brethren tacitly in the construction of dwelling-houses and cowsheds; in the excavation of ditches near them; in digging of pits in some corner for the reception of manure; in throwing refuse either in front of or rear of their abodes; in defectaing on maidans, in the rear of houses, or on roadsides and banks of tanks, both by males and females. One dwelling-house in a village is the pattern of others. The only place where cleanliness is observed by the people is the kitchen, which it is leeped with cow-dung and mud every morning, and swept several times during the day, and this practice prevails in every house. The courtyard and the fronts of the house are to a certain extent kept clean in some villages. Here all conservancy ends. Instead of throwing the house sweepings and refuse on a distant place away from the village, they are generally kept in some corner till a large heap is formed, and then even it is not removed, but allowed to rot there. The house surroundings are seldom, if ever, kept clean. In one corner of the house a few broken handies; in another corner faggots; in a third some rubbish; in the rear heaps of filth or refuse; a small ditch in one corner or in front or back; a pile of straw cuttings or grain on one side; a cowshed close to it; and a small vegetable garden somewhere about the place, are commonly to be met with. Tidiness is unknown to the rural population. They seldom dust the walls and roofs of their houses, which are invariably full of cobwebs, dirt and soot. The entire absence of latrines or private privies prevails throughout the interior of the district. Their superstitions are so strong that no mehters can be found anywhere in the villages. Rear of houses, roadsides, bamboo topes, bank of tanks, &c., are the places for defectation or the privies of the rural people, whether male or female, young or aged, rich or poor. In rainy weather, specially, the surroundings of the houses become worse, for then, in association with the stagnation of water, the accumulation of refuse and cow-dung, &c., the deposits of human ordure tend to aggravate or increase the evil. At times the offensive odour or stench emanating from the filth is very great. Nevertheless, the occupants of the houses are not disturbed by it, but are at ease. Generally the villagers are scantily clad, and they wear the two dhuties they possess till they become almost black, and they wash them in the same pond or tank the water of which is also used by them for culinary and drinking purposes. Drainage.—In the majority of the villages, nay in almost all, drainage is imperfect or defective and obstructed or insufficient. Water-supply.—The villages in the Midnapore district suffer more or less from scarcity of good drinking water. There are numerous pends, tanks and ditches, but very few of them are good ones. If there is a good tank in a village, it is neverallowed to remain so and free from pollution, as the customs of the people to wash and bathe in the same tank, debars them from enjoying the benefits of drinking unpolluted and wholesome water. The abundance of excavations and ditches, close to dwelling-houses is mainly due to the practice of taking earth for building mud houses. These excavations are never filled up, nor are they dug enough to form tanks; and in the rainy weather water collects in and converts them to what the people and in the rainy weather water collects in and converts them to what the people call dobas or ponds. The close proximity of these excavations to dwelling-houses is not accidental but premeditated for the convenience of the family, their water being at hand always for use. In many villages the people are so badly off for water that they are compelled to drink the water of these ditches or dobas. It may be imagined that these rustic people are in the habit of drinking filthy and dirty water out of choice; but such is not the case, for many of them take the trouble of going a long distance to fetch a vessel of good water. There are very few tanks which do not receive surface drainage. Well water is also used by the people; but the village wells are not protected by puece paramets. Their margins are merely surrounded by a few stones, and by pucca parapets. Their margins are merely surrounded by a few stones, and the surroundings of the wells are seldom kept clean. Hence their water is not very clean and has a peculiar odour. On the whole, there is no deficiency of water in general, but what is felt is the want of wholesome drinking water. Disposal of the dead. - Generally there are no fixed places for the cremation or interment of the dead. The convenience of the peeple is the first point. The Hindus burn their dead on what are called sasáns—waste lands—and banks of tanks, the latter being preferred. In several villages the people drink the water of the same tank near which the dead are cremated. In villages which are close to rivers or khals, the dead are cremated on their banks, and some people,

after burning the body partially throw it into the water. The people do not hesitate to drink this water. The Mussulmans bury their dead generally near their houses, either in mango topes or near tanks. Chunderkona thana—Domestic cleansing.—In this thana domestic cleanliness is somewhat cared for. The surroundings of the houses are very nearly of the same description as in other places. There are no public or private privies. The cow-sheds are in the majority of cases located near dwelling-houses, but they are kept pretty clean. Dead cattle are removed to waste lands at a convenient distance from the houses. Water-supply.—The main source is tanks which are numerous; but there are very few big and good tanks; scarcely any are free from aquatic vegetation—weeds, sedges and pana—and all receive, to more or less extent, surface drainage. Their water is also contaminated by washing and bathing carried on in them. Although the water-supply is sufficient as regards quantity, there is no doubt that good and wholesome drinking water is rather scarce. Drainage.—The drainage of the villages is very imperfect; in fact there is scarcely any. Ghatal, Keshpur, Gurbetta, Panskura, Nundigram, Sutahatta Egra, Contai and Sabang thanas.—The arrangements under all heads in these than as are almost identical, and if described would very nearly resemble those obtaining in the Midnapore thana. The main differences are the following: The villages in thana Keshpur are not very filthy, and in The main differences are many of them there are large tanks which are kept clean and reserved for drinking purposes only. Most of the villages in thana GARBETTA are situated amidst sal forests, and some villages possess natural drainage owing to their elevated positions. In the Panskura thana the drainage is more or less effective, as channels have been provided to carry off the water to the irrigation canals.

Bankura District.—Gangajalghati is the worst thana in this dis-Dwellings and Domestic cleansing — The villages are generally situated The dwelling-houses are built invariably in amidst forests and paddy-fields rows or groups close to each other. Domestic cleanliness is not at all observed. The condition of the compounds, the fronts and backs of houses, the corners all round the house is shocking. There is no part, even including the entrance to the houses and the pathways, which is free from accumulations of filth, garbage, sweepings, straw cuttings, cowdung, dung-hills, &c., and during the rains the condition becomes tenfold worse. There are no latrines or privies. Drainage is defective or nil. Water-supply is taken from tanks and wells chiefly. In places where there are khals or rivulets, they are also resorted to. The tanks are scarcely free from pollution and contamination; so also are the wells, as they are not protected by pucca parapets against receiving surface drainage, and their surroundings are filthy. No tank or well has been exclusively reserved for drinking purposes. There is no deficiency as regards the quantity of the water-supply, but good drinking water is scarce. Disposal of the dead.—Cremation is carried on near the sal forests, or on waste lands or banks of tanks, according to the convenience of the people. BISHENPORE, KOTALPORE, SONAMUKHI, ONDA, and BANKURA thanas. The arrangements under all heads in these than as are identical with those in Gangajalghatti, with the following exceptions:-Domestic cleansing is far better observed in all these thanas and the houses and their surroundings are not so filthy. In BISHENPORE the wells are to some exent protected by stones or earthen parapets. In Sonamukhi and Onda the water-supply is insufficient. In BANKURA there are several large tanks, but unfortunately none of them have been reserved exclusively for drinking purposes. General health was on the whole pretty good in both the districts of Midnapore and Bankura, but in some villages only in Midnapore several persons were found to be suffering from chronic enlargements of the spleen. Advice tendered.—Verbal instructions were given by the Deputy Superintendent to the rural people almost everywhere as to how they should live and keep themselves and their houses, and he explained to them at the same time what benefits would accrue to them from observing the rudiments of sanitary laws, and how baneful and injurious to them the neglect of these precautions would prove. On several occasions the Deputy Superintendent came across vernacular schools and patshalas where the children were being taught Sarir Palan ("How to preserve health"), and he took the opportunity to instil into the minds of the pundits and their pupils the absolute

necessity of observing the simple hygienic rules inculcated in that little book. He observes that "light of knowledge and civilization have not as yet penetrated these rural areas. The organization and establishment of small minor vernacular schools all over the districts, and the diffusion of elementary education among the mass of the people enabling them to understand the value of good and bad living, is the essential thing wanted." In places where the people complained of bad water, he always took pains to explain to them what precautions are to be taken before using such polluted water, the necessity of boiling the water, and of using alum or nirmali (strychnos potatorum) to clarify He also advised them to keep at least one tank separate and reserved for drinking water. In places where the surroundings of dwelling-houses were found to be filthy, he advised the owners to remove the refuse and louse-sweepings to a certain distance, explaining to them in full the injurious effects on health of polluted and contaminated atmosphere. In several villages in thana Gungajalghatti, where the surrounding of the houses, the roads and pathways even up to the entrance of the house, were found blocked up by filthy accumulations, he induced the householders to remove, then and there, the filthy heaps, giving at the same time strict orders to the village chowkidars to see that they are removed and the places cleaned within a week's time. But he is of opinion that the surest way to improve the sanitary condition of the rural areas is to impart to the rural population elementary education and knowledge sufficient to enable them to understand the value of domestic cleanliness in all its phases.

DERKONA TOWN.—Domestic cleansing is not quite satisfactory. One tank only has been reserved for drinking purposes exclusively. The drainage is to a great extent effective. It empties into the Norakati khal which joins the river Doni. Bankura District. Bishenpur Town.—Surface cleansing is well attended to here. There are some public latrines, and the well-to-do have private privies of their own. Almost all the roads are provided with side-drains, and the drainage acts, on the whole effectually. There are several large tanks or dighis. Their water is not unwholesome; but most of them are now overgrown with weeds and aquatic plants. Of the above tanks, only one has been reserved exclusively for drinking purposes. There are also a few pucca wells in this town. Kotalpur is a pretty large rural town. Its roads and pathways are mostly pucca and in good order, and are kept clean. The drainage is defective. The water-supply is taken from tanks and wells which are not above suspicion. Sonamukhi town.—Domestic cleansing is fairly well attended to.

The drainage is defective.

Assistant Surgeon Jogendra Nath Dutta, Deputy Superintendent.—This officer inspected, for sanitary purposes, all the wards in the Suburbs of Calcutta. His report furnishes a general account of the Municipality as a whole, and contains important suggestions for improving the sanitary status of each of its wards. He says:—The sanitary condition of the Suburbs of Calcutta is deplorably bad. All the bustis are in a more or less insanitary condition, and some of them extremely filthy. The drainage arrangements are very defective, and where drains exist, they are found full of sewage matter, stinking abominably and wanting in outfall. They are not regularly cleaned, and the road-side drains are generally obstructed with street sweepings, and in places are full of stinking slush. The watersupply is insufficient and generally bad; the tanks which supply water to the mass of the Suburban population receive the surrounding surface washings, and the water they contain is generally found to be discoloured and utterly unfit for drinking and culinary purposes. The conservancy arrangements are most unsatisfactory throughout the Municipality. Heaps of decomposing refuse lie unremoved on the road-sides and about habitations. The public latrines are not always regularly cleaned, and smell badly. Moreover, in some of the bustis they are built in dangerous proximity to tanks, and, owing to there being but a few free latrines, promiscuous defeccation is general. Want of public urinals also promotes surface defilement. As regards ventilation, the bustis are generally crowded and closely built. Under these disadvantages it is not to be wondered at that the health status of this Municipality is as bad as ever. Suggestions submitted with reference to each ward.—Cassipore.— In this ward measures should be adopted for improving the sanitary condition

of the Mutijeel and Rajabagan bustis, and to fill up the pits and hollows made by digging earth for building purposes, and Baninath Pal should be ordered to provide a better and longer chimney for his oil engine. Chitpors (1). To provide better conservancy arrangements and proper drainage in Nobabputty, Charinorpara, and to re-form in a proper manner the Narikelbagan Nobabputty, Charinorpara, and to re-form in a proper manner the Narikelbagan and Tyndelbagan villages, provide pucca drainage, and adopt measures for the proper removal and disposal of the refuse matter kept in heaps in them. (2) To close up the several foul-water ponds in Khasbagan without delay, and to clear the jungles that abound in it. (3) To take immediate steps to improve the condition of Bysskbagan and Durgapur, and to open out roads for conservancy carts in Ghosebagan busti. (4) To cover the tank which has been filled up with street sweepings on the canal side with a layer of earth to prevent it becoming a nuisance. Ultadinga.—(1) To place the Settbagan busti on a better sanitary footing, and to demolish the private privies built in close proximity to the tanks, the water of which is used for culinary purposes. (2) To take steps to keep clean the gowala busti in Haldarbagan, and to adopt measures for the complete removal every day of the cowdung from the drains. (3) To repair complete removal every day of the cowdung from the drains. (3) To repair the kutcha roads in Kacheebagan and Pearbagan bustis as they are hollowed out in the centre. Manicktolla.—(1) To close against further interment the Chopedarbagan burial-ground in Manicktolla with the least possible delay.
(2) To attend to the better sanitation of the Manicktolla busti, and provide better conservancy arrangements in it. (3) To enforce strict supervision over the sanitary arrangements in the Nebubagan and Lalabagan bustis, and to see that road sweepings and other rubbish are removed daily, and that the side-drains are not blocked up and obstructed. (4) To have the kutcha road in Badalpara properly metalled. Balighatta.—(1) To provide the Rajabagan and Shahebbagan bustis with an efficient system of drainage. (2) To put down indiscriminate defocation by the dhangurs in Rajabagan busti. (3) To remove the cowdung from the Marhatta ditch, and keep that ditch in proper working order. (4) To place the slaughter-house on a better sanitary footing, and to prevent the surface defilement that takes place there. (5) To provide the Jugipara busti with an efficient system of drainage and better conservancy arrangements. (6) To have the lime-kiln in Chingrihatta removed without delay, and to look after the sanitation of the Bagdipara busti. Entally.—(1) To have the large drain passing by the Moulali Durga in Entally thoroughly cleared out of silt and sewage. (2) To provide the Gulpara busti with an efficient system of drainage. (3) To have the Eutusbagan busti which has been recently burnt down, re-formed with due regard to sanitation. (4) To fill up the several low lands in Tengra, and to strictly prohibit the keeping of pigs in Haldarbagan. (5) To approve the sanitary condition of Harec-para busti. (6) To see that the latrines in Armonibazar are daily and para busti. properly cleaned, and the washings regularly removed. Baniapukur.—(1) To provide the Tantibagan busti with proper drainage, and see that accumulations of filth do not occur in it. (2) To have the large drain which carries the washings from the different tanneries in Dugdugipara made pucca as early as possible. (3) To see that the washings of the hides are properly disinfected and removed somewhere beyond the limits of the Municipal-(4) To have the Tiljalla burial-ground closed, and the road to Tiljalla metalled. (5) To put a stop to the throwing of the cuttings of hides on the roads, and to see that they are not collected in heaps, but removed daily. Ballygunge.—(1) To stop promiscuous defectation in Naskarpara in Ballygunge, to fill up the pits, hollows and ditches that abound, and cut down the jungle which grows luxuriantly here. (2) To improve the sanitary condition of Bogbagan, and to order the removal of the soap manufactory to somewhere else. (3) To have the kutcha road metalled. (4) To adopt better conservancy arrangement in Malai busti, and to take immediate steps to open out roads for conservancy carts in Singerhati mohulla. (5) To improve the sanitation of Chandmari by the clearance of jungle. Bhowanipore.—(1) To provide the Gungaram and Walfut Bagan bustis with proper and efficient drains, and to adopt means for the daily removal of the buffalo excreta. (2) To place the Porabagan busti on a good sanitary footing, and to see that the drain passing through the bazar is kept clean. (3) To put a stop to children defectating on the roadsides in Badapara. (4) To maintain strict

supervision over the Sitaram and Gossay bustis, so that they do not fall back to their former insanitary condition. (5) To close the many foul water tanks belonging to the Haldar family in Kalighat. (6) To attend to the drainage of the Jalapara busti and of the localities in Kalighat, all of which discharge their contents into tanks. Tallygunge.—(1) To fill up the pits and hollows which exist outside the burning ghat and to establish proper conservancy arrangements in Bangul Bazar and Kalupara. (2) To cause the private latrines to be regularly cleaned by the melters, so that indiscriminate defectation in the jungle may be stopped. Alipore.—(1) To convert into good tanks the large excavations made for earth for bricks by Messrs. Mackintosh, Burn & Co. in Durgapore. Watgunge.—(1) To remedy the grave sanitary defects which exist in Uriapara busti. (2 To place the Sukteepara busti on a proper sanitary footing. (3) To see that the bustis are properly and regularly cleaned. Ekbalpone.—(1) To have the drain in Ramchandrapore busti well cleared out and its communications with tanks cut off. Garden Reach.—(1) Not to allow the inhabitants of the new Kapidanga busti to dig out earth, and to fill up without delay all existing excavations. (2 To provide better conservancy arrangements in Moochi Kholla busti, and to erect public latrines for the inhabitants of the Singerlati busti. (3) To take early steps to remedy the grave sanitary defects which exist in Dhankhati and Jorukoti, the properties of the ex-King of Oude. 4) To have the drains kept properly clean, and to remove all weeds and jungle which obstruct them.

220. DARJILING CIRCLE.—Surgeon Major J. J. Wood, Deputy Sanitary

Darjiling	district.	 Bogra distr 	rics.
Thanas.	No. of villages.	Thanas.	No. of villages.
Darjiling Kurs-ong Kalimpong	12 4 1	Sibganj Bogra Adamdighi Sheriakandi Dhunat outpost Sherpur	2 13 2 2 3 2
Jalpaiguri	district.		24
Jalpaiguri Mynaguri Dubguri Keranti Shikarpur Boda	1 1 1 1 1 2 1 7	Pubna dist Serajgunge Raiganj Ulapara Shazadpur Pubna	rict 4 1 1 2 1
Rungpore	district.		9
Dimla Jhaldaka Kaliganj Darwani Kumargunj Nisbutgunge Nageswari Myganj Molong Sadullapur Pirganj Gobindganj	2 2 1 1 2 1 2 1 2 1 3	Rajshahye di. Nattore	elriot.

Commissioner.—The sanitary inspections of this Officer extended over only four towns and 78 villages in the thanas in the districts named in the margin. He does not appear to have inspected any village in thana, Sundergunge in Rungpore, to which his vaccination duties took him; and although he visited 424 villages for the same purpose in the above marginally-named thanas, including Sundergunge, he limited his sanitary inspections to only 78 of them, taking only one to four villages in each thana for this purpose, Darjiling and Bogra excepted, where 12 and 13 villages were inspected. inspected, respectively. His report is very meagre, and loses much of its value by its extreme brevity. It furnishes no special account of the sanitary status of the thanas inspected On this point it merely tells us that the sanitary conditions of the villages in the different registering circles visited do not exhibit much difference, and that they are almost precisely alike, and are all bad. It then. dwells upon the sickness which prevailed in some of them, showing where cholera and fever exhibited themselves to a more or less extent, and men-

tions that the drinking of water in which jute had been steeped was believed to have caused bowel-complaints, fever, colds and cholcra; that goitre is very prevalent, chiefly among women; that rheumatism, to which his special attention was directed, was not very commonly prevalent; and that, onthe whole, the general health was good. Further on in his report Dr. Wood states that instructions and advice on sanitary matters were tendered by him to the people, particularly with regard to keeping the water-supply unpolluted, and to the necessity of observing cleanliness in and around dwelling.

houses, but that he cannot speak favourably of the results of the advice given during former visits, for the villages are found in the same filthy condition year after year. Registration appears to have been tested in the usual manner by him and his subordinates, and, with reference to this subject, he notes that the police appear to think it a merit not to find persons of the names given by the Inspectors of Vaccination as not having been entered in the than a registers. With regard to suggestions for the rectification of sanitary defects observed, Dr. Wood says:—"The important sanitary defects observed require what to us appear obvious simple changes, such as the removal of dung and corpses and filth-pits; the use of clean water for washing as well as drinking; the abstaining from polluting the soil and air by using the surface of the ground near houses for the reception of waste water and ordure. The police might be enjoined to see that corpses were buried or properly burnt and not thrown bodily into water." He thinks that in order to correct the defects, the application of the "Practical Hints" of the Army Sanitary Commission, which were circulated in 1879, is indicated.

221. Moulvic Tajumul Hossein, Deputy Superintendent.—This Officer inspected,

Purneah dista	ricl.	Dinajpur dis	trict.
Thanas.	No. of villages.	Thanas.	No. of villages.
Kadwa Gondwara Arrarea Motiari Bahadurganj Kissenganj Raniganj Shaifgang outpost Dingraghat Belgachia Flwabari Gysal Polashi Bhatgom "	1 2 4 4 5 1 1 2 1 2 1	Rajarampur Ranisankoil Patnitola Potiram Mohadevpur Porshu Atwari outpost Reliadangi ,, Khanshama ,, Total	2 3 2 3 4 6 2 26 26
Total Jalpaiguri dis Boda Shikurpore Tilotya outpost Deviganj " Total	36 4 3 4 1 1 12	Shibganj English Bazar Kaliachuck Malduh Tulsihatta outpost Total Darjiling disid	14

for sanitary purposes, only 90 villages in the thanas in the districts named in the margin, but his inspection so far as it goes was very careful. He appears to have entirely omitted to inspect any village in thana Jalpaiguri and thanas Purneah, Mattiari, Kaliagunge and Jhaghole in Purneah; Pirganj, Birgunge and Thakoorgaon in Dinajpur; and Gomastpur, Nawabganj, and Manickehuck in Maldah; and although he had occasion to visit 634 villages in the thanas marginally included on vaccination duty, he, as above stated, inspected only 90 of them for sanitary The number of villages inpurposes. spected by him in each thana (excluding the outposts) is also small—so small that their sanitary condition cannot fully represent the health status of the thanas in which they are situated—a point was specially impressed upon the attention of all the officers of the Vaccination Department with reference to the sanitary inspections of this year. It must not, however, be forgotten that many of these villages are of large size, extending in a scattered manner

over a large tract of country, and that their inspection necessitates the expenditure of much time and physical exertion. Dr. Wood has furnished an abstract of this Officer's sanitary inspection report, dealing with the subject generally, and it is very meagre. The salient points mentioned therein are subjoined. Dwellings and Domestic cleansing.—The houses are built on are subjected as a best reached along that are the same and the same and the same are subjected. raised floors and are kept neat and clean, but cattle dung is heaped in front of them where they have no receptacle for sewage. Some latrines were noticed within the house compounds; but in general the fields are resorted to Roads.—The village roads are always narrow. Water-supply for defocation. is taken from rivers, tanks and wells. Some tanks are unclean, and the mouths Disposal of the dead.—In some places of many wells are protected by fencing. the Hindu dead are thrown into the rivers and the Mahomedan dead interred within house enclosures. Dead cattle are thrown on the fields, health.—Good in some parts of the districts, bad in others caused by fever and cholera. Registration was looked after in the usual manner. Advice tendered.— The Deputy Superintendent advised the people to rectify sanitary defects. It was noticed that no action was taken on the advice given during the preceding year.

222. Assistant Surgeon Jogendro Nath Bhuttacharjee, Deputy Superintendent .-

Rajshahye	di l trict	•	Bogra dis	trict.	
Thanas.		o, of lages.	Thanas.		o. of
Burigram Besulcah Nattore Lalpur Panchupore Nougaon Putca Charghat Godayari		1 2 10 8 9 11 9 8 8 8 -	Adamdighi Bogra Khetlal Shibganj Panchbibi Nowabgunge	•••	3 5 4 3 5 4
Rungpore d	listrict.	8	Pubna dist	rict.	12
Nageswari Borobari Mygunj Molong		5 9 2 2 2 26	Neemnagor	•••	3 15 —

This Officer inspected, for sanitary purposes, one town and 126 villages in the thanas in the districts named in the margin. The observations made above with regard to the report of Deputy Superintendent Tajumul Hossein also apply to that of this Officer. Dr. Wood's abstract of his report is summarized below. Dwellings and Domestic cleansing—In Rajshahye and Pubna most of the villages are situated on low land, and are subject to flooding during heavy rains. The soil is alluvial and damp. *Rungpore and Bogra are drier, and the soil is generally clay or clay intermixed with sand. The houses, as a rule, are constructed of reeds or smashed bamboos plastered with mud and they are not overcrowded; but their

and refuse, sweepings, cowdung, &c., are heaped behind every house. There are no latrines. Drainage is defective. The roadsides are not properly drained. Water-supply is taken from rivers, tanks and wells. The chief sources of pollution are washing and bathing in the vicinity of wells, and placing branches of trees with leaves in rivers for the purpose of catching fish. Disposal of the dead.—The Hindu dead are cremated on the banks of rivers and bhils, and the Mahomedan dead interred in the compounds of dwelling-houses. Jute-steeping is carried on in parts of Rungpore and Rajshahye. Registration was tested in the manner laid down in the rules on the subject. General health of Rajshahye and Pubna was, on the whole, good. In Rungpore, cholera prevailed epidemically in several villages. Advice tendered.—The people were recommended to keep the compounds of their houses clean; to throw the sweepings, &c., at some distance and to cover them with earth from time to time; and to discontinue the practice of washing and bathing near wells, and of placing branches of trees in the rivers. Recommendation.—The Deputy Superintendent suggests that the Road Coss Department be required to pay attention to the roads which are not provided with side-drains.—223. Ranchi Circle.—Assistant Surgeon Kasi Nath Ghosh, Officiating Deputy

Lohardugga district. No. of Thanas. No. of Thanas. villages. villages. 54 Chowparun 22 Ranchi 15 13 Sili Tamar Bagodhar 27 ... ••• 6 Dumri ... Simuria ... ••• ••• 19 12 Khanti ٠... ••• • • • • 22 Kera . . . --• Chatra 24 22 30 Huntergunge Manda 16 Lohardugga ... Chatterpur 21 9 Total ... 378 Clarwa ••• Daltongunge ... 16 Manbhum district. 4 Manka Jhaldah ... Total 226 13 80 Gobindpore Purulia Nirea ••• 40 ••• Hazaribagh district. 88 Total ••• 24 4 48 Ramgurh Jageswar Tandowa ... Singbhum district. ••• 83 Hazaribagh ... ••• Saraikola (tiridih 61 57 Chyebassa Kharakdiha 75 Chuckurdhurpore 5 ••• Garwa Total 80

Commissioner. - This Sanitary Officer inspected, for sanitary purposes, nine towns and 772 villages in the thanas in the districts marginally cited. This work he accomplished during an almost unbroken tour extending over five months, from the latter end of October to the end of It should be noticed, morcover, that this Officer also inspected villages which were out of the way of those which he had to visit in the usual course of his vaccination inspections, so that he has inspected, for sanitary purposes, 42 more villages than he visited for the inspection of vaccination work. The report on the subject submitted by him has been drawn up. in accordance with the instruc-

tions which were issued in the matter, and possesses considerable sanitary value. The following is a resumé of the chief matters dealt with in it:—

Lohardugga DISTRICT—RANCHI thana.—The villages in this thana are, with a few exceptions, situated on elevated ground, and small hills exist in proximity to some of them. Dwellings and Domestic cleansing .- The dwelling-houses are built with mud, and roofed partly with thatch and partly with tiles, on low plinths, sometimes scarcely half a foot above the surface of the ground. They are however, with a few exceptions, free from damp. There is very little jungle, but undergrowth and rank vegetation surround them. The sleeping rooms are ill-ventilated and overcrowded at night, and portions of them are also used by the poor for housing cattle at night, which otherwise are kept in separate sheds, but close to the sleeping rooms. The village pathways are used as latrines by the children. In several villages there are pits and excavations in which cowdung is accumulated, which is removed only once a year, about March or April, for manuring the fields. Cattle dung, in various stages of decomposition, and house sweepings are also met with heaped close to almost every house. The people defecate anywhere and everywhere. The Koeri, Kurmi and Goar tribes appear to have some pretension to personal cleanliness, and wash their bodies every third or fourth day; but the Kols are said to bathe once in a fortnight or so, and their bodies are very dirty. Roads and Drainage.—The village pathways are kutcha, narrow and drainless.' In villages situated on elevated ground the natural drainage is efficient during the rains; but in the low-lying ones it is defective, stagnation of water takes place, and the ground gets, in some places, moist and sodden. Generally, surface drainage and washings find their way into the surrounding rice-fields, or, in some instances, into the bandhs and tanks. Water supply is generally obtained from kutcha wells, the margins of some of which are surrounded with loose stones, but all are used promiscuously for all purposes. In some villages it is taken from daris (natural springs) and small hill streams; but the former are open and unprotected, and subject to contamination in various ways. Bandhs or tanks are found in many villages, but they are mostly used for the washing of cattle and clothes. It is, however, gratifying to learn that some of these bandhs, in a few villages, have been set apart for drinking purposes; but they are liable to pollution by surface drainage. Disposal of the dead.—The Hindu dead are cremated on the banks of the river Subarnarekha, or on the side of any other stream or water-course. The Kols burn their dead on the fields adjacent to their dwellinghouses. The interment of the Mahomedan dead takes place in waste lands, or in gardens close to the villages. General health.—Outbreaks of cholera are rare in some, and quite unknown in many, villages. Fever is the ordinary complaint. The majority of the people are poor and insufficiently clad. They live upon rice and dal grown by themselves. Jute-steeping is carried on in the bandles or jhoras, and a jungly plan. only aitta, is also steeped in some villages. Sill thana.—The villages in this thana are scattered and situated, some on elevated, and some on low ground. I) wellings and Domestic cleansing.—Some villages are very filthy, and their pathways covered with rubbish and refuse. The cattle are housed in the compounds of dwelling-houses or in sheds close to the sleeping rooms, and their dung is used as fuel or stored in heaps behind the houses, for manure. Water-supply.—Rivers and daris are the chief sources of drinking water, and bandhs and marshes are utilized for the washing of clothes, cooking utensils, and cattle. The latter are often covered with weeds, and their banks over-grown with low vegetation. In some villages the rivers Uraongurha and Subarnarekha are resorted to when the daris dry up in the hot weather. Their water is said to be good; but they dry up during the summer, and then their beds are dug to supply the Rivulets are also utilized, but the dead are often cremated on their banks, and clothes and cattle are washed in them. A few villages obtain their drinking water from kutcha wells the surroundings of which are filthy. In village Sili there are two pucca wells which are protected by parapets and reserved exclusively for drinking purposes, and in village Raha there is a tank, but it is polluted. Jute-steeping is carried on in tanks and bandhs in many villages. Tamar thana.—Dwellings and Domestic cleansing.—The villages are generally filthy, and in some the houses are crowded together and ill-ventilated internally. Defeccation is promiscuous, and as a rule, house refuse, ashes, &c., are heaped behind houses. Drainage is generally

defective, but where the ground is undulating, it is helped. Water-supply is taken from bandhs, daris and rivulets, all which are polluted in various ways. Water-supply is The bandhs, where large, promote ground dampness. Wells exist in some places, but they are kutcha and used promiscuously. Disposal of the dead.—The Hindu dead are cremated behind the houses, or on the sides of water-courses from which drinking water is taken. In some villages the dead are both interred and cremated a short distance away from them. Kuncı thana. - Domestic cleansing.—The same defects, as above mentioned, were obsered under heads "Watersupply" and "Domestic cleansing" in all the villages in this thana. Drainage.—
The general undulating nature of the ground on the ridges of which the villages are, as a rule, situated, help to drain them, more or less completely, during the rains. Water-supply. - Most of the villages depend upon daris as the chief source of their water-supply for all purposes; and a few only have bandhs, small streams and kutcha wells. The bandhs, however, mostly dry up long before the hot weather sets in, and they and the streams are polluted by the washing of clothes and cattle in them. In some villages there are only small tanks which are contaminated in various ways. Disposal of the dead.—Cremation of the dead is, as a rule, performed in the fields adjacent to the villages, and in only a few villages are the bodies removed to the banks of some rivulet or water-course for the purpose. In the Christian villages the burial-grounds are situated at some distance from them, and generally these villages were found in a comparatively cleaner condition. Jute-steeping is practised in some villages in this thana. Kera thana.—Dwellings and Domestic cleansing.—The pathways are filthy. Cowdung is partly used as fuel and partly stored in heaps for manuring the fields.—Promiseness defencation and accumulation of cowdung and house Cowdung is partly used as fuel and partly stored in heaps for manuring the fields. Promiscuous defectation and accumulation of cowdung and house refuse of all sorts close to sleeping rooms obtain in all the villages of this thana. In their persons the people are generally very filthy. Drainage.— The natural drainage appeared to be more or less free owing to the clevated position of the village sites. Water-supply.—Many villages have to depend entirely upon daris for their water-supply for all purposes, but a large number of them have bandhs or nullas close by to wash and bathe in. It is only in the hot weather, when some of the bandhs dry up, that the daris are promiscuously used for all purposes, and their water thus rendered unfit for drinking. Wells, pucca and kutcha, are met here and there. In village Kera one of the two pucca wells, the water of which is pure and wholesome, is reserved exclusively for drinking purposes. Disposal of the dead.—Cremation is carried on generally on the fields, but in village Kera some of the dead bodies are conveyed to the river Chutla, two miles off, for cremation. Manda thana.—Dwellings and Domestic cleansing.—The arrangements under this head in this thana exhibit under this head, in some respects, a contrast to this head in this thana exhibit under this head, in some respects, a contrast to the general rule. The interior of the houses is generally in a pretty clean condition, but they are ill-ventilated. The cowdung is removed to a distance and deposited in pits, in gardens, or fields. The house-sweepings and rubbish are burnt at intervals; but defectation is promiscuous. *Drainage*.—The villages in this thana are situated on elevated ground, and consequently their natural drainage is more or less free by discharge into the adjacent fields. *Water-supply* is had from derig rivelets butche wells and tanks, and in a few places from is had from daris, rivulets, kutcha wells and tanks, and, in a few places, from the river. In some villages tanks are set apart exclusively for drinking purposes. The daris and wells are promiscuously used, and their water is consequently impure and unfit for drinking. The river water is considered pure. Disposal of the dead.—The cremation of the dead is conducted in adjacent General health was good. Lohardugga thana.—Dwellings and Domestic cleansing—The villages are, as a rule, situated on rising ground, and the dwelling-houses are mostly mud-walled, and roofed partly with thatch and partly with tiles. The sleeping rooms are dark and ill-ventilated. The cattle are kept in sheds close to, and, by the poorer classes, in, the sleeping rooms. Cowdung is accumulated for manure, and house-sweepings and refuse straw are thrown about. Water-supply is taken from daris, wells and bandhs. The bandhs are used for washing and bathing purposes; but the daris and wells are also promiscuously used in some places, and their water is consequently rendered unfit fordrinking. General health was good. CHUTTURPUR thana.—Domestic cleansing.—
Jungles abound in the vicinity of the majority of the villages in this thana,
particularly of those on the west and south of the police-station. They are,

with rare exceptions, kept in a dirty and filthy condition, chiefly by the accumulation of cattle-dung and refuse straw. Drainage.-The villages being situated on elevated ground, the natural drainage is efficient during the rains. Water-supply.—Drinking water is obtained from pucca and kutcha wells and daris, the latter being in most instances the only source of water-supply in the villages in the south. In a few villages it is taken from small streams and tanks, the latter being generally resorted to for bathing and washing purposes. The water in the villages in the south and west of the police station is reported to be of bad quality, and to be the cause of the great prevalence of fever in these localities. The quality of the water in the villages on the east is reputed to be good. General health was fair. GARWA thana.—Dwellings and Domestic cleansing.—The villages are situated on elevated ground, and therefore drained efficiently during the rains. They are in a more or less clean condition. The dwelling houses are built with mud, and their roofs are mostly thatched with foos. Many of the houses are used as shops or chattees, and the rooms are overfull with the various articles which are vended, and still they are used to sleep in at night. Water-supply.—In Sukbona, which is a poor and scattered hamlet, drinking water is obtained from a dari; but in all the rest of the villages it is taken either from wells, some of which are pucca, or from the nearest rivulets. General health was good.—Daltongunge thana.—The villages in the north and west of this thana are kept pretty clean, the cattle-dung and refuse straw, the chief elements of village defilement, being burnt as fuel. Drinking watersupply of these villages is principally obtained from wells, many of which are pucca and protected by parapets. There are bandhs also in some of the villages, but they are used for washing and bathing purposes. In Chainpur there is a good tank and several pucca and kutcha wells. In Bahmundihi there are two pucca wells and a tank. Many people of Suhapur and Simatand drink from the river Kocl. On the other hand, most of the villages which are on the far south of the town are in the proximity of jungles. Their situation on elevated ground helps to drain them freely during the rains; but they are in a dirty condition. The cowdung and house-sweepings are kept in heaps in the front and backyards of almost every house. Pucca wells in a few, and kutcha wells in all the rest supply the drinking water, and bathing and washing are carried on in rivulets or jhoras. There are no bandhs or tanks. Defectation and cremation of the dead are chiefly performed on the river-side. General health was good. Manka thana. — Domestic cleansing. — The villages are remarkably filthy. Heaps of decomposing cowdung and rubbish of all sorts are to be seen close to every house. Water-supply is bad and scanty. It is taken from wells, daris and jhoras. The wells are generally used for all purposes, and their surroundings kept in a dirty condition. In an outbreak of cholera in some of the villa, it this thana, the Deputy Superintendent advised the people as to how cholera stools and the bedding, &c., of the deceased should be disposed of, and pointed out to them the importance of domestic cleansing and uncontaminated drinking water.

GARWA is a rural town containing about 900 houses. It is situated on the western side of the branch of the river Koel, on elevated ground sloping towards the north and east. Dwellings and Domestic cleansing.—Some of the houses are brick-built, and the others mud-walled with tiled roofs. They are ill-ventilated, and mostly line the sides of the main roads of the town. The streets and pathways are kept clean. There are two public latrines, and a conservancy cart is maintained. There are privies which are cleaned by mehters employed by their owners. The night-soil is thrown on distant fields. Roads.—The main roads are pucca, broad and provided with shallow side drains. Drainage.—The natural drainage is good, and the drains of the town are kept clean. Water-supply is taken from the rivulet in the north and east, and from pucca wells. There is a tank in the north behind the police-station, but it is utilized only for bathing and washing purposes. Dalton-gunge—Dwellings and Domestic cleansing.—This town is situated on elevated ground which slopes towards the river Koel on the west. It contains a large number of houses, many of which are brick-built, but roofed with tiles. The streets and pathways are regularly swept and kept clean. There are two public latrines and two conservancy carts. The private latrines, which are

surface ones, are cleaned by private mehters. The night-soil is thrown on distant fields. Those who have no privies of their own and do not frequent to the public ones, resort for defectation to adjacent fields or to the sides of the river. Roads.—The streets and pathways are mostly pucca, and are provided with shallow side-drains, which are kept clean. Water-supply.—This is taken from the many pucca wells in the town and from the river Koel, the water of which is reported to be of good quality. There is also a tank near the charitable dispensary, but it is resorted to only for washing and

bathing purposes.

226. Hazaribagh District.—Ramgurii thana.—Domestic cleansing.— Personal cleanliness is not observed, and the villages are, without exception, kept in a dirty condition by promiscuous defocation and accumulations of cowdung, and house-sweepings anywhere and everywhere. Drainage.—The villages being invariably situated on elevated ground, the natural drainage is more or less free. Water-supply is from rivers, daris, nullas, bandlis, wells The water from these sources, is more or less polluted. and shallow tanks. Disposal of the dead.—The practice in the majority of the villages is to remove the dead for cremation to the banks of some rivulet or water-course. In some villages this process is carried on close to the villages. General health was good. JAGESWAR thana. - Domestic cleansing. - Some of the villages are situated in jungly and hilly tracts. They are for the most part in a filthy condition, with heaps of decomposing cowdung behind, and against the walls of, the dwellinghouses, and with the pathways covered with refuse, straw and rubbish of all sorts. as well as with human excreta. Water-supply.—The drinking water is generally obtained from kutcha, and in a few cases pucca, wells with filthy surroundings, which are promiscuously used for all purposes. Small streams and shallow pools of dirty water are also used. Jule-steeping is carried on in streams and rivulets. Disposal of the dead.—In this thana dead bodies are cremated in adjacent TANDOWA thana. - wellings and Domestic cleansing. - The houses are built of mud, and mostly have tiled roofs, and are ill-ventilated and crowded at night. The villages, with some exceptions, are kept in pretty clean condition, the house-sweepings and rubbish being burnt at intervals, and the ashes, refuse, straw and cattle-dung deposited for manure in pits in the fields at a distance. In some villages the cowdung is used as fuel. In village Burkagaon there are well-privies, but they are never cleaned. As a rule, the fields are resorted to for defeccation. Drainage—The villages being mostly situated on high ground, the natural drainage is free. Water-supply is obtained from rivers, wells, daris, bandhs and nullas. The bandhs are generally used for washing and bathing purposes. Some of the wells are pucca and protected by parapets, but they are promiscuously used, and dry up in the hot weather. The running streams are polluted by the washing of clothes and cattle, and by deforcation on their banks. General health was good. HAZARIBAGH thana.—Dwellings and Domestic cleansing.—In point of construction the houses are the same as in other thanas. The village sites are more or less free from jungle, but the villages themselves are generally filthy. Rubbish and refuse are accumulated on the pathways, and heaps of decomposing cowdung are to be met with. Urainage.—The villages being mostly situated on elevated ground, and the ground being undulating, the drainage appeared to be efficient, the rainwater escaping into the adjacent bandhs, nullas, or rice-fields. Water-supply is taken from bandhs, daris, nullas and wells. The bandhs are covered with weeds and vegetation, and although the rain-water flows into them, rendering them prejudicial to health, they make up for the deficient water-supply from other sources in most villages. Washing of clothes, cattle, and cooking utensils generally takes place in them, and in the hot weather most of them dry up, and it is then that the wells, which are for the most part katcha and unprotected, are used promiscuously for all purposes, and their water rendered impure and unfit for drinking. The nullas are invariably polluted by the washing of buffaloes in their shallow streams and the cremation of the dead on their banks. The daris are situated mostly on low land, and are subject to contamination by surface drainage. There is a hot spring in village Echak which is resorted to, but its water is never. used for drinking. Jute-steeping is carried on in a small scale in village Echak. GIRIDHI thana.—Domestic cleansing.—The villages are, as a rule, filthy. are no proper pathways. Accumulation of house-refuse and rotting cowdung

Drainage. near the dwelling-houses and promiscuous defeecation are common. The villages being, as a rule, situated on elevated ground, the drainage is more or less free during the rains. Water-supply.—The rivers Oosri and Burakur, several rivulets, nullas, daris, bandhs and kutcha wells are the sources of water-supply. The rivers are chiefly used for washing and cleansing purposes. On the whole, the water-supply is impure, the sources being polluted in the manner described above. Disposal of the dead.—The dead are generally cremated on the banks of rivulets. General health was good. KHARAKDIHA thana.— Dwellings and Domestic cleansing.—With a few exceptions, the villages are small, and consist of clusters of tiled and thatched huts. The villages and the pathways are generally filthy, mainly caused by a much larger number of cattle being kept than the villages can accommodate. Cowdung and refuse heaps are The utilization of cowdung as fuel is observed in a limited number of the villages. In many villages the houses are crowded together and generally ill-ventilated internally, even the entrance doors being too small to admit a liberable amount of air and light. Promiscuous defectation is general. Drainage. -The natural drainage is more or less free, and discharges into the surrounding rice-fields, or in some cases into the bandhs or nullas. Some of the roads are provided with shallow side-drains, which are, however, obstructed. Water-supply is from nullas or small streams, daris, bandhs and wells of which some are pucca. Generally the villages, situated on the east of Kharakdiha and in the Dhunwar and Biruch outposts, are provided with wells; those on the west depend upon The bandhs are nullas, and those on the north and north-east upon daris. utilized for washing and bathing purposes. The daris and the wells, most of the latter of which are not protected by parapets and have fifthy surroundings are promiscuously used. Disposal of the dead -Cremation is generally carried on on the banks of the nearest rivulets, the water of which is used for many household purposes,—in some instances even drink-Jute-steeping is carried on in some villages in the outpost of Biruch. General health was good. GARWA thana.—The condition of the villages in this thana is essentially the same as in thana Kharakdiha, with the differences, that they are for the most part in close proximity to hills and jungle, and that a large number of the dwelling-houses are in a dilapidated condition. The water-supply is taken from daris, nullas and wells, all of which are pollated in various ways. Chowparun thana.—Domestic cleansing.—The villages in this thana are for the most part close to hills They are in a filthy condition, chiefly resulting from accumulation of cattle-dung and house-sweepings. Drainage. - Its elevated position helps to facilitate natural drainage. Water-supply.—This is mostly obtained from small hill streams and null and is used for all purposes. There are also The nullas and the nill streams are polluted by the washing of cattle in their scanty water, and the cremation of the dead on their banks. General health.—Fever prevails greatly from August to November. extensive chuttee (Chowparun chuttee) in this thana situated on the Grand Trunk Road, which consists chiefly of mud-walled and tile-roofed houses crected in rows on both sides of the road extending over nearly a mile, and also of a few brick-built structures. This road is provided with shallow side-drains The cartmen, who use this road as their which are kept pretty clean. staging place, sometimes render it filthy. Drinking water is obtained from a number of pucca wells protected by parapets; from a tank on the north of the chuttee, the water of which, used mainly for bathing and washing purposes, is filthy and contaminated by defocation being freely carried on in the field adjacent to it; from two bandhs close to the police-station on the east, which contain water of good quality, and is used by many people; and from a pucca well in the compound of the police-station, which is reputed to contain the best drinking water in Chowparun. There is a camping ground for soldiers on the south of the chuttee, which was in a clean condition. BAGODHAR thana.—Dwellings and Domestic cleansing.—The villages in this thana are situated, some in the midst of open rice fields, and some in the vicinity of jungles. They are, as a rule, filthy; refuse, straw, cattle-dung and house-sweepings being accumulated in different places. Drainage.—The natural drainage is free in most of the villages. Water-supply.—Wells, daris and nullas are the sources, all of which are polluted in various ways. General health

was good. Dumbi thana — Domestic cleansing. — The villages are for the most part hilly and jungly, and their general condition is much like that of those in Ranchi Cowdung is stored as manure in them, and defectation is promiscuous. Drainage.—The villages being situated on elevated ground, the natural drainage is free. Water-supply.—This is obtained from wells, nullas and daris. The level of the well water is at a considerable depth below the surface of the ground. Health.—The outpost of Churki is notoriously feverish. Simuria thana.—Domestic cleansing.—The villages are for the most part in a pretty clean condition. The house-sweepings and rubbish are burnt at intervals, and the cowdung removed to the fields. Drainage.—The natural drainage of the villages which are situated on low ground is defective, but that of those situated on high ground is free. Water-supply is obtained from daris, pucca and kutcha wells, bandhs or tanks. Most of the last dry up in the hot weather, and then the daris and wells are used promiscuously for all purposes, and their water polluted to a great extent. General health was good. Chattra thana.—Dwellings and to a great extent. General health was good. Chattra thana.—Dwellings and domestic cleansing.—The villages are generally situated at the foot of hills with jungles in their vicinity. The dwelling-houses are for the most part small thatched huts, and generally in a dilapidated condition, only a few villages containing tiled huts of better structure. They are generally dirty, which is chiefly due to accumulations of dung of cattle and pigs which are kept in the compounds of dwelling-houses. Drainage.—This is generally good, except in villages situated on low ground. Water-supply is from rivers, nullas, daris and wells some of which are pucca. Bandhs and tanks are scarce. The river water is good, but is polluted in some places by jute-steeping and bathing of cattle. General health was fair. Huntergunge thana. - Dwellings and Domestic cleansing. -Some of the villages are situated at the foot of the hills, some on elevated positions, and a few on low ground. Jungle abounds in places. The dwellinghouses consist of mud huts, partly roofed with thatch and partly with tiles, and many of them are in a wretched condition. There are pucca houses in some villages. The sleeping rooms are ill-ventilated and crowded with various articles. With some exceptions, the villages are kept in a pretty clean conditions, the cowdung being thrown on the fields at a distance, and the house-sweeping, refuse, straw, &c., collected and burnt at intervals. Water-supply. - This is obtained from rivers, nuddis, daris, wells and bandhs. The river water is polluted with human ordure, and is generally used for bathing and washing of clothes and cattle. The wells are contaminated by bathing and washing of cooking utensils near them. Disposal of the dead.—Cremation of the dead is conducted on the riverside. General health was good.

227. MUNICIPAL INSPECTIONS.—Hazaribagh DISTRICT.-ECHAK, an old rural town, contains numerous mud-walled houses with tiled roofs, and several pucca ones constructed in the old style almost without windows. They line the road-sides. Roads.—These, although narrow, are sufficient in number, and several of them are pucca, and provided with shallow side-drains. Domestic cleansing.—The town is becoming overgrown with low vegetation since its abolition as a union. A few houses are provided with privies, which, however, are never cleaned, and the majority of the people resort to the adjacent fields for defectation. Cowdung is partly utilised as fuel and partly stored for manure outside the limits of the town. Water-supply.—There are many pucca wells, and a tank in a tola called Porasi. The water of this tank is used only for bathing and washing purposes. The wells are indiscriminately used. Disposal of the dead.—The dead are cremated on the banks of a rivulet. Giribhi town.—Drainage.—This town is situated on sloping ground, extending from the south to the north and north-east. It is divided by the Hazaribagh road into a northern and southern portion, and the natural drainage of its southern portion discharges into the side-drains of this road; but it has become defective from these drains having been neglected of late, and from a subterranean drain, which traverses the station and conveys surface water into the Railway tank, having become choked. The drainage of the northern portion finds its way into the adjoining rice-fields. The read-side drains are shallow and have been obliterated in some places and are deep and overgrown with vegetation in others. The consequence is that the rain water collects in the hollows and renders the soil very damp. This dampness is probably one of the causes of the fever which has been persistently prevailing in

the town of late years. Divellings and Domestic cleansing.—There are a few pucca buildings, but the rest are mud-walled with tiled roofs, erected on low plinths, and are ill-ventilated. About a fourth of the population have got surface privies, most of which are regularly cleaned; but the night-soil is thrown on the adjacent fields. Defecation is carried on by the majority of the people on the road-sides and fields or in any convenient or hidden corner. The sweepings and house-refuse are accumulated in the backyards of almost every house, or thrown into any ditch or hollow which happens to be near at hand. The quarter of the town known as the gowalapara, or where gowallas dwell, situated in its very heart, and where a large number of cows and buffaloes are kept, is most filthy. The cattle-dung is heaped up and allowed to rot and wash down into the streets in the rainy season. The offal, &c., of the Railway Bazar slaughter-house are thrown on the adjoining fields. Disposal of the days. ing fields. Disposal of the dead.—The Hindu dead are cremated on the banks of the river Oosri on the north of the town, and the Mahomedan dead are interred in a piece of waste land by the side of the Serampur road on the east. Water-supply.—This is obtained from wells, most of which are pucca and well protected by parapets and surrounded with masonry platforms; but they are used promiscuously for all purposes and their cones of percolation are filthy, and yet their water, the level of which is within 4 or 5 feet of the surface of the ground, is reputed to be of good quality. The Railway has a tank, and there is another tank or bandh; but both of these are scarcely used by the people. Dhanwar town.—Dwellings and Domestic cleansing.—This is a small rura, town, and the seat of a zemindar. It is pretty thickly populated, and contains besides a large number of mud-walled and tile-roofed houses, about 50 pucca buildings. A number of these houses is erected in lines on the road-sides and are used as shops by the people. Many people have surface privies which are are used as shops by the people. Many people have surface privies which are cleaned by mehters; but the majority resort to the adjacent fields for defeecacleaned by menters; but the majority resort to the adjacent neids for defecation. The night-soil from the privies is thrown into a rivulet on the south.
There are a few well-privies which are never cleaned Drainage.—The roads
are kutcha and narrow, and are provided with shallow side-drains which are
kept pretty clean; but they are obstructed in some places by rubbish. Watersupply.—Drinking water is obtained from wells, several of which are pucca
and provided with parapets; but they are also used for all other purposes.

Disposal of the dead.—The Hindu dead are cremated on the banks of a rivulet half a mile off, and those of the Mahomedans are interred in a plot of waste land about a mile from the limits of the town. SERAMPUR town.—This is a small rural town, and the seat of an outpost of thana Giridhi. There are a few pucca buildings belonging to the remindars, but the rest of the houses are mud-walled and tile-roof d, creeted chiefly in rows on the sides of the Scrampur road. Domestic cleaning.—The interior of the town is in a tolerably clean condition. The cattle dung is removed and thrown on the field at a distance, and the house-sweepings burnt at intervals; but promiscuous defeccation is general. Water-supply. - Drinking water is obtained from wells, many of which are pucca and their margins surrounded by parapets; but they are, with rare exceptions, also used for all other purposes. Chatra town.—Besides the quarter known as Bind and the town itself, which are close to each other, the Municipality of Chatra includes the villages of Darjibegha, Raghubordih, and Kissunpur. Drainage and Roads.—The town is situated on elevated ground sloping towards the north-east, in which direction the greater portion of the surface drainage flows and ultimately falls into the Heroonuddi running on the east. The Bind portion is, however, situated on comparatively low ground, and its drainage is so very imperfect, that its lanes and pathways remain under water during the rains. The drainage of the villages Darjibegha, Raghubordih and Kissunpur escapes into the adjoining fields. The roads are both pucca and kutcha. The sudder road, which is the widest and best road in the town, is provided with shallow pucca drains, which are kept in a clean condition. Pucca side drains have also been provided for the Bind road, the godown road, and for portions of the Marwaritola and Chuttaloo roads. The side drain of the Chuttaloo road is short in length, runs on its one side only is dangerously deep, deficient in level, full of vegetation, and kept in a very dirty condition. The drains of the Bind road and the godown road are also defective in level and full of vegetation. The rest of the roads

are provided with kutcha, shallow side drains, most of which are properly levelled and kept clean. But the drains by the side of the new road are full of dry leaves from trees, and the Sunghat lane as well as the byepaths in the interior of Bind, are drainless and dirty. Dwellings and Domestic cleansing. Most of the pucca roads in the town are regularly swept every day. The . dwellings, many of which are brick built, are erected so close to each other as to preclude perflation of air. Conservancy.—The conservancy establishment consists of 23 sweepers, mehters and cartmen, and there are five carts and six bullocks; but only four of the carts are used. There are three public latrines, but no urinals. The latrines are pucca and kept in a pretty clean condition; but there are no separate latrines for the females. The night-soil is neither trenched nor deposited in any fixed place. Water-supply.—The drinking water is obtained from several pucca wells, which are provided with parapets and surrounded by masonry platforms. Some of these wells are, however, situated on low land and their surroundings are filthy: The water of the well in Katolia is reputed to be the purest and the most wholesome. There are several tanks, but they are used for bathing and washing purposes. The water of the municipal tank, which is situated close behind the dispensary, is drank by the many travellers who pass through the town. All the tanks, even including the municipal one, are in a more or less dirty condition. The margin of the tanks known as Gonowri Talao and Chut Talao are sufficiently raised to protect them against surface drainage, but not so those of the municipal tank. The water in the tanks along the thana and the Bind roads stinks. Disposal of the dead.—There are burial-grounds in all directions of the town. The one on the north is close to a pucca well, the water of which is used for drinking purposes. The Hindu dead are cremated on the banks of a nullah on the north-east of the town, but some are removed for cremation to the Heroonuddi about a mile off. health.—Want of drainage and proper ventilation, as well as its generally-dirty condition has rendered Bind the most unhealthy quarter in the Municipality. The majority of the fever cases resorting to the dispensary come from this quarter. The rectification of the sanitary defects of Bind is therefore urgently called for, and cannot be too strongly urged. Recommendations.—To clean the municipal tank and protect it against surface drainage by an embankment; to fill up the tanks by the sides of the thana and the Bind roads as soon as funds will permit; to remove the insanitary conditions of Bind; to provide the town with urinals and separate latrines for the females; to fix upon and set apart certain plots of land for the burial of the dead and not to permit interment in all directions of the town; to trench the night-soil in a suitable place, and to cultivate the trenching-grounds.

228. Manbhum District.—Jhalda thana.—Domestic cleansing—Generallythe villages seen are filthy, chiefly owing to the accumulation of cowdung and house-sweepings. Drainage is defective. Water-supply is taken from tanks and wells; the former being subject to pollution from surface drainage, and the latter from promiscuous use. Govinpur thana.—Dwellings and Domestic cleansing.—The villages seen in this thana are mostly situated on the north side of the Grand Trunk Road, and are overgrown with jungle. They are generally small, and consist of clusters of thatched huts, and are in a filthy condition from the usual causes. Water-supply is chiefly taken from bandhs, daris and nullas. The washings of the villages drain into the bandhs during the rains. Jute-steeping is carried on in them, and they dry up in the hot weather, when daris and nullas are resorted to. General health.—It is said that, owing to the bad water-supply, some of the villages in this thana are notoriously feverish from August to December. Nirsha thana.—The villages inspected in this thana consist mostly of small clusters of houses built of mud and thatched with straw, and are filthy from the same causes as obtain in Govindpur thana. The sources of water-supply are also the same as in Govindpur, and are similarly polluted, except that the water of the Khida nuddi is said to be good, notwithstanding that it is polluted by the washing of cattle in it and defectation and cremation of the dead on its banks. Purulla thana.—Dwellings and Domestic cleansing.—The villages in this thana are generally small, and consist of clusters of thatched huts, excepting that in a few villages large-sized houses having tiled roofs are to be met with. The houses being scattered, external perflation of air is not obstructed,

but generally they are ill-ventilated internally. In most instances the greater portion of the sleeping rooms are filled with chattels, and the little space left is overcrowded with inmates. The village pathways, as well as the front and back yards of almost every house, are dirty and unswept, refuse of every description and heaps of ashes and cattle dung lying about them. In some of the villages, however, the cowdung and refuse straw are burnt as fuel. Drainage and Roads.—The drainage is generally defective; but during the rains the small streams and nullas drain the villages. The main roads leading to the Purulia town have been planted with a large number of trees. Water-supply.—This than abounds in bandhs or tanks, most of which are said to contain good drinking water, but the greater number of them are not protected from surface drainage during the rains; defectation takes place on their sides; and the washing of cloths, cattle and cooking utensils is carried on in them. Some villages depend for water on tanks only a few of which have been set aside for drinking purposes alone; some on daris; and others on wells most of which are kutcha. Disposal of the dead.—The dead are generally cremated on the side of some river

or small stream or nulla. General health was good.

MUNICIPAL INSPECTIONS.—Manbhum District.—JHALDA town.—Dwellings.—This is a thickly populated large rural town. It ceased to be a Union three years ago. The dwelling-houses are for the most part mud-walled, but there are a few pucca buildings. On the west is a hill called Kalitangri, and, during the rains, water flows down from it, inundates some parts of the town, and collects in its road-side drains. Water-supply.—There are ten tanks in the town and many wells only two of which are pucca. A small river, called Saldaho, also flows close by on the east and south. of the tanks receive surface drainage, but tank water is chiefly used for cooking and washing purposes. The well water is reputed to be of good quality, but, with a few exceptions, it is rendered impure by promiscuous use. Conservancy.—
The people who have immigrated into the town have privies which are, however, not cleaned. The rest of the people defected anywhere and everywhere. The cattle are kept in separate sheds in the compounds of dwelling-houses, and their dung is in some villages stored in heaps to form manure for the fields, and burnt in others as fuel. Disposal of the dead — The Hindu dead are cremated on the banks of the river Saldaho, and the Mahomedan dead are interred in two plots of waste land about a mile off on the east and west of the town respectively. The dead cattle are thrown on a field at a distance, but their flesh

is eaten by a tribe known as the Ghasis. General health was good.

230. Singbhum District.—Seraikela thana.—Dwellings and Domestic cleansing.—The villages in this than are, as a rule, situated on rising ground, some in the midst of open rice folds and some in the vicinity of jungle and small hills. The dwelling-houses are constructed of mud walls and thatched roofs, without any means of ventilation, and the sleeping rooms, which are also used as store rooms, are overcrowded at night. House-sweepings and refuse straw are kept scattered all about the compounds of houses, and the cowdung is stored for manure in the interior of some of the villages, and at a little distance Defœcation is promiscuous. Drainage.—The natural outside in others. drainage appears to be free, the surface water finding its way into the adjacent bandhs and small streams. Water-supply.—This is principally obtained from bandhs which are polluted by surface drainage, and in various other ways; and in the hot weather, when most of them dry up, water from daris and hill torrents is used for drinking as well as other purposes. A few villages have kutcha wells which are promiscuously used and their surroundings kept in a dirty condition. Disposal of the dead.—The dead are generally cremated on the fields adjacent to the dwelling-houses and in some cases they are taken for the purpose to the side of some nulla. General health was fair. CHYEBASSA thana.-The condition of all the villages in the Kolhan is almost alike. A general idea of it will be had from the following description of those in than Chyebassa. Dwellings and Domestic cleansing.—The villages are invariably situated on elevated ground either adjacent to rice fields or at the foot of small hills, and low jungle abounds in the outskirts of many of them. The dwelling-houses are erected under large tamarind, peepul and plum trees, which have been planted for useful purposes, and which form a prominent feature of a Kol village. Arni plants are also largely cultivated in the villages, from the seeds of which oil is pressed out

These houses are generally small huts on low plinths, walled for domestic use. with mud and thatched, and the walls, being neatly built and painted outside with white, ash or yellow color, present a pretty, picturesque appearance which diverts the attention of a superficial observer from the filthy condition of the localities on which they stand. Excepting the small entrance door, the sleeping rooms have no other openings for ventilation, and they are consequently practically The space in them, insufficient of itself for the accommodation, without crowding, of its inmates, is partly occupied by goods and chattels of various kinds, and the poorer people also keep their poultry in them Hence the stagnant atmosphere of a Kol sleeping room would in no time become acutely poisonous were it not for the light structure of the thatched roof, through which a certain amount of air is let in which helps to dissipate, to some extent, the impurities. Holes not more than a foot square, barred with pieces of bamboo, have, however, been introduced into the walls of some of the recently-constructed houses. Goats, pigs, ducks and fowls are kept in large numbers in sheds erected close to the sleeping rooms, and their droppings are found scattered all over the compounds. Cowdung is also stored in heaps in the front and back yards of almost every house, and house-sweepings and refuse straw are massed in every corner. The dry leaves from trees form an additional source of unclean-Defocation is promiscuous in all the villages. Water-supply.—This is principally taken from daris and from bandhs, rivers, nullas and kutcha wells. The bandhs receive surface drainage during the rains; washing of clothes and cattle and steeping of jute are carried on in them, and most of them dry up in the hot season; but they, as well as the nullas, are scarcely used for drinking purposes. The daris are kept scrupulously free from pollution, even the washing of hands and feet in them is not tolerated, and villages which have no other source of water-supply than daris, collect their water, as it drains out, in a pool at some distance for the use of the cattle and for washing purposes; but in the hot weather, when some of the daris dry up, the want of water is greatly felt. When this occurs, the villagers, particularly those in Choraipur, Bankolapur and Goukevapur, fetch water from rivulets flowing at a considerable distance. Disposal of the dead.—The dead are cremated by the Kols in the compounds of their dwelling-houses, and by the Ghasis and Kurmis at a distance on the fields. Food.—The Kols generally live upon one meal in 24 hours, which is taken at night and consists of rice and dâl. In the daytime they drink freely a fermented liquor made from beaten rice with the addition of a vegetable powder called ranu or bakhor. They are very fond of meat, and do not even hesitate to eat the flesh of dead animals. General health was good. SUGGESTIONS FOR IMPROVEMENTS .- The following sug-

gestions have been submitted by the Deputy Sanitary Commissioner:—(1) Whenever new houses are to be built, the people should be instructed to erect them sufficiently apart from each other, and provide them with windows, so that free external perflation and internal ventilation of air will be secured. that tree external pernation and internal ventilation of air will be secured.

(2) To see that the cattle are kept in sheds outside the house compounds and not in the sleeping rooms. (3) To discontinue the practice of accumulating cowdung for manure close to dwelling-houses or in the interior of villages, but to place it on the fields at a distance, or use it as fuel whenever practicable. (4) To fill up with rubbish and house-sweepings the pits and excavations that are found in some villages in the Ranchi thana. (5) To induce the householders to keep their compounds in a clean and tide account. excavations that are found in some vinages in the manch thana. (5) To induce the householders to keep their compounds in a clean and tidy condition by collecting together and burning down refuse, straw and house-sweepings at intervals. (6) To set apart in each village certain wells, tanks orderis, as the case may be, exclusively for drinking purposes, and to keep their surroundings in a clean condition. (7) To sink wells in the localities where there is scarcity of water, and to attend to the water-supply of certain willages in the Kelber where secreity of water is creatly felt in the but weether villages in the Kolhan, where scarcity of water is greatly felt in the hot weather. (8) To prohibit promiscuous defocation by fixing upon and setting apart certain waste lands for the purpose. (9) To stop the practice of burying or burning the dead close to villages or on the banks of water-courses which supply the drinking and cooking water. (10) To prevent the people of Kharakdiha from burning their dead on the side of the river Ossri which flows by the village, and supplies it with water for various household purposes. (11)

Not to permit the Kols of Chyebassa to cremate dead bodies in the compounds of their dwelling-houses. (12) To re-establish Municipalities in the towns of Ichak and Jhalda in Hazaribagh and Manbhum respectively. (13) To convert the town of Giridhi into a Municipality, or to remove the sanitary defects which obtain in it at an early date. Registration.—With some exceptions, Registration was attended to in the usual manner in this Circle, but no good results have yet followed.

wije.	noowun	o waryeon I ro	OUNTED L
Manbhum d	istrict.	Singbhum di	strict.
Thanas.	No. of villages.	Thanas.	No. of villages.
Purulia Para Gourandi Raghunathpore Barabazar Ichagurh Chas Topechanchi Govindpore Nirsha Manbazar	47 5 6 6 8 8 7	Chyebassa Scraikela Chuckerdherpore Ghatsilla Total	14 18 3 8 43
Total	102	1	

Assistant Surgeon Prosonno Kumar Dey, Deputy Superintendent.—This officer's sanitary inspections extended over five towns and 145 villages in the thanas in the districts marginally named.

Chychassa 14 His report, an abstract of which is subjoined, deals in a general manner, as wholes, with the sanitary conditions obtaining in the districts visited by him.

233. Manbhum and Singbhum DISTRICTS.—The villages in these districts are, as a rule, situated on high ground surrounded by low cultivated fields, and many have rivers, streams or jores, and some hills and jungle, near

Dwellings and Domestic cleansing.—The houses are mere huts thatched with straw, and insufficiently ventilated, and their floors are kutcha and low, but still not damp owing to the drainage being free, the ground surface being undulating, and the soil sandy and rocky. The cattle are kept in sheds having insufficient accommodation for them. There is some regularity observed in house construction in Manbhum, as they line both sides of the village roads called here koalies, whereas in the Kolhan, in Singbhum, they are scattered. The village pathways are mere tracks, and in many they constitute deep nullas serving the purposes of drains, being about 5 or 6 feet below the sites on which the dwellings stand. In these, knee deep water and mud remain continuously for four months of the year. No conservancy arrangements exist either in Manbhum or Singbhum. Water-supply is taken generally from tanks and bandhs for all purposes in Manbhum, excepting in the villages along the Grand Trunk Road, where well water is used for all purposes. Only one tank is kept isolated and guarded for drinking purpose solely: this is the Jemadar bandh in Kassipur belonging to the Pachet Raja of that place. River (the Damuda) water is solely used by the people in Ghurhur, which is situated on the bank of Disposal of the dead.—The dead are burnt on the sides of a near river or jore, but in many places in thanas Manbazar, Purulia, &c., they are thrown into the jungles. The Mahomedans bury their dead outside but near The Kols of Singblum burn their dead partially, and then bury the bones in an open space within or near their villages. The account given regarding food and drink corresponds with that furnished by the Deputy General health was good, but in some thanas in Sanitary Commissioner. The Assistant Surgeon adds Manbhum measles prevailed epidemically. that the description given above applies to the villages of all the thanas; but that he saw in a large number of villages large heaps of offensive cattle dung and house refuse, and he called on the people to have them removed

Manbhum.	Singbhum.
In thana Purulia— Balgura. Ludharka. Kurcha. Busaurma. I thana Manbazar— bla'a. Lisabazar. Adurdib.	In Chychasa thana— Kalhar. Barkela. Lala. Purulia.

to the fields before the rains set in. This was particularly observed in Holdipukur and Doogdha in Seraikela and in Ghurhur in thana Govindpur. He reports that the villages named in the margin are insufficiently supplied with water, and that the pressure is felt most in March and April. In the Kolhan, in Singbhum, some villages have gurrahs in

low marshy fields, others have daris, the water of which is not fit for drinking. Registration was looked after in the usual manner. Suggestion.—The Assistant Surgeon submits the following suggestions:—(1) Some measures should be taken for the better supply of water in the Kolhan villages, and the best measure would be to direct the Mankis and Mundas to construct a good well in each village. (2) In the town of Chas in Manbhum, the following improvements

are called for :(a) Of the two lac factories one, belonging to Raj Kristo, requires a pucca drain from the large gurrah to the low cultivated fields, as the gurrah contains lac washings which find their way into a tank; and the other, belonging to Hit Lal Jamti, requires a pucca working ground and drains within its compound; and (b) The drain in the house of Nundolal Dutt should be done away with, as the house-washings flow through it to a public road.

(3) In Nirsha (thana Nirsha) a pucca drain is required from the highest point of the camping ground, running along the northern side of the Grand Trunk Road in front of the police-station and Public Works Department bungalow, and falling into the low cultivated fields. If this is constructed, it would (a) prevent the old Government well from being polluted, (b) prevent damage to the Grand Trunk Road caused every year by the overflow of water from the northern side, and (c) prevent similar damage to the houses and shops in the southern side of the road caused by the same overflow of water.

234. SONTHAL PERGUNNAUS CIRCLE.—Assistant Surgeon Kali Prosunno Ghosal, Deputy Sanitary Com-

Monghgr district.		Sonthal Pergunnahs district.		
Thanas.	No. of villages.	Thanas.	No. of villages.	
Surajgurra Tegra Monghyr Gogri Begu Serai Bullia Lukhiserai Shekpura Kharakpur Buriarpur Khagria Burhurwa	7 65 88 59 20 36 20 36 456	Pakur Dumka Mohagama Mudhupur Jamtara Total Bhagulpore of Kistenganj Hauka Colgong Kotwali Sultanganj Mudehpura	71 49 30 5 64	
		20001	100	

Prosumo Ghosal, Deputy Sanitary Commissioner.—This Officer's sanitary inspections embrace four towns and 783 villages in the thanas in the districts named in the margin. His report, a resumé of which follows, shows that he paid attention to his duties in this direction.

235. Monghyr DISTRICT.—SURAJ-GURRAII thana.—Dwellings and Domestic cleansing.—The villages generally are situated nearly on the same level with the surrounding country. A large tract of swampy land adjoins villages Jagadispur, Jagirpura and Surajgurra. The houses are constructed of mud walls with thatched roofs, and are crowded together and ill-ventilated.

The inhabitants, consisting chiefly of Hindus with a sprinkling of Mahomedans, are quite indifferent to personal cleanliness. There is no conservancy in any village, and decomposing cowdung is accumulated near the houses and removed only when required for manuring purposes. Some of the houses in Jagadispur, Jagirpura and Surajgurra are provided with latrines, some of which are well-privies and some surface privies; but they are not cleaned properly. Nuisances, including defocation, are committed in pits and hollows of which there are many, on the pathways, waste lands and cultivated fields, and near houses. Roads and Drainage.—The roads are kutcha, narrow, tortuous, and in a miserable condition, and they are mostly unprovided with side-drains, and where these exist, they are blocked up with refuse, &c. The drainage is not free anywhere, so that the pathways become impassable during the rains. Disposal of the dead.—The dead are taken to the Ganges for cremation, and in some places waste land is preferred for the purpose. Dead cattle are thrown on waste lands or near villages. The general health was not bad. Tegra, Monghyr, Gogri, Beguserai, Bullia, Luckiserai, Shaikpur, Kharagpur, Buriarpur, Burharwa and Khagria thanas.—The villages in these thanas present the same insanitary conditions and other features as obtain in thana Surajgurra. It was, however, noticed that in some villages, specially in Tegra, the Mahomedans bury their dead near their houses, and the pauper dead are cast into the Ganges or into rivulets. Water-supply.—The chief sources of water-supply in the district of Monghyr are large wells protected generally by parapets. In some places the Ganges and rivulets are resorted to. The water of many of the

wells is brackish, but still the people consider it good.

236. Bhagulpore District.—Kissenganj, Madhepura, Sultanganj, Kotwali, Colgong and Banka.—The sanitary and other features obtaining in these thanas are identical in every respect with those of the Monghyr thanas, excepting in the following respects:—(1) In thanas Kissenganj and Madhepura the villages are excessively damp; the climate unhealthy, owing to the greater portion of the villages being annually submerged by the floods of the Kosi river; the women, especially of the poorer classes, are very filthy in their habits, never

changing their clothes until extremely dirty, and scarcely ever washing themselves; the cattle are lodged in the dwelling-houses; the wells are unprotected, and contain unwholesome water; and fever with spleen prevails in many villages in Kissenganj during the greater portion of the year. (2) The other thanas mentioned above are not so damp and unhealthy as Kissenganj

and Madhopura.

Sonthal Pergunnahs DISTRICT.—BARHARIDA thana.—Dwellings and Domestic chansing.—Of all the thanas in the Sonthal Pergunnahs, the villages in this than awere found in the worst sanitary condition—worse than that of the villages in the districts of Monghyr and Bhagulpore. These villages are situated on low ground, surrounded with swampy rice-fields. The soil consists of a mixture of clay and sand, and retains a greater amount of moisture than that of any other thana. The houses are crowded together, and the floors are very damp, especially during the rains. The inhabitants, consisting of Hindus and Mahomedans, chiefly of the lower classes, are unmindful of personal cleanliness. Surface cleansing is not attended to, the only scavengers being pigs. Conservancy nil. Heaps of decomposed refuse and cowdung are accumulated in the village pathways and in the neighbourhood of the houses. cation is carried on on the road-sides, borders of tanks, and in any unoccupied place in the village. Drainage.—Surface drainage has been completely obstructed, and during the rains the emanations from surface impurities are Water-supply.—The chief source is tanks, but the excreta on their banks are washed down into them during the rains, and the water from this and other causes is highly polluted. There are also small wells in some of the houses, but they are not properly protected. Disposal of the dead.—The arrangements under this head are the same as in other thanas. PAKUR, DUMKA, Mohagama, Modhepur and Jamtara thanas.—Dwellings and Domestic cleansing.— The villages in these thanas are generally cleaner and drier than those of any other than mentioned above. Those in Modhepur and Jamtara are situated on ground higher than the surrounding country, while those in the other thanas are generally situated on the same level as the surrounding fields. The soil consists of brown, dry, stony sand having greater power of radiating heat, and thus differing from that of all the other thanas. The houses are generally erected in lines along pathways, but they are devoid of internal ventilation, and crowded with inmates. Cattle are kept within them in some places, but they and their courtyards are usually swept carefully and helped: and in this particular they differ from the arrangements carefully and helped; and in this particular they differ from the arrangements obtaining in the thanas above named. Conservancy nil, but the road-sides are not so often resorted to for defectation, &c., and consequently the villages wear a cleaner appearance than go rally the case. Water-supply is taken from small wells and rivulets, the water of which is reputed to be good. Disposal of the dead.—Cremation is carried on on the banks of the Ganges, near a rivulet or at the foot of a hill; and some piece of waste land near the village is used for burials. Registration—This was attended to in the usual manner. General health.—An epidemic of small pox, of short duration, prevailed in the district of Monghyr during the months of April, May and June, and cholera visited the towns and other villages in the Bhagulpore and Monghyr districts during the months of July, August, September and October. Advice tendered.—The Deputy Sanitary Commissioner explained to the people the beneficial effects of sanitation on their health, and tried to induce them to sweep and leep their bcuses carefully; to sweep the portion of the pathway in front of each house; to remove the sweepings and refuse at once to some place near the khets, instead of recumulating them about their houses; not to resort for defecation to the p thways, excavations and upoccupied places near the houses or the borders of tanks; to wash their clothes and persons; not to throw dead snimals near the villages; and to provide windows for their houses to secure proper and constant ventilation. He reports that in many villages the intelligent portion of the community was impressed with the value of his advice, but complained that the ignorant people, particularly the women, committed nuisances on the pathways and other improper places, especially during the night. He directed the chowkidars to keep a watch over this practice, but he thinks that it cannot be stopped easily. The villagers generally agreed at the time to carry out the instructions given, and the panchayats and chowkidars were directed to induce them to do so; but the Deputy Sanitary Commissioner says that he has scarcely any hope that his suggestions will be faithfully carried out, as the people are ignorant, and do not really understand the value of the rules of sanitation. In some villages he received the disheartening reply, that as the existing insanitary conditions have descended from their forefathers and never did any harm in former times, why should they now be productive of evil. Suggestions. - Under this head the Deputy Sanitary Commissioner observes that as it can scarcely be hoped that any real improvement in the sanitary condition of the villages can be secured until the people themselves really understand the benefits of sanitation, and that the best measure that should be adopted for permanent improvement in this direction is to impress them with the principles of sanitation by teaching. He urges that the establishment of patshalas in every village should be encouraged, and that among other books for study, a sanitary primer should specially form one; and he adds that at present much can be gained by making it one of the duties of the chowkidars to see to the cleanliness of their respective villages, to induce the people to clean their houses and pathways and remove the refuse at once to some place near the khets, to report any one who resorts for defectation to any improper place, and to see that excavations are filled up and dead cattle are not thrown near the village.

238. EASTERN BENGAL CIRCLE.—Assistant Surgeon Narendro Nath

Backergunge district.		Dacca district.		
Thanas.	No. of villages.	Thanas.	No. of villages.	
Sorupkati Gournadi Mendigunge Nulchiti Jhalokati Burisal Backergunge	53 38 20 21 23 22 30	Keranigunge	3	

Gupta, Deputy Sanitary Commissioner.— This Officer visited, for sanitary inspections, three towns and 210 villages in the thanas in the districts named in the margin. The report submitted by him, an abstract from which is subjoined, indicates that he bestowed much attention to this portion of his duty.

239. Backergunge District.—SARUPKATI, GOURNADI, MENDIGUNGE, NAL-

CHITI, JHALOKATI, BARISAL and BACKERGUNGE thanas.—Low lands are to be met with in thanas Sarupkati and Jhalokati, but the villages in the rest of the abovementioned thanas are situated, comparatively speaking, in more or less elevated positions. All the villages, without exception, are subject to flooding, the effects of which are considered to be beneficial. Many rivers and khals intersect all these thanas, and rivers are most numerous rivers and khals intersect all these thanas, and rivers are most numerous in Mendigunge, Barisal, Backergunge, and portions of Gournadi, and khals in Sarupkati, Jhalokati and Backergunge, the Nalchiti thana being somewhat deficient in these water-courses. Filthy ditches, marshes and other excavations exist, to a more or less extent, in all the thanas, notably in Gournadi, Mendigunge, Nalchiti and Backergunge. Jungle also abounds in them, specially in Mendigunge and Backergunge, where the hogla jungle affords shelter to tigers, wild buffaloes and boars. Betel, cocoanut and other fruit trees are very common, and not only interfere with the free portletion of air but also obstruct the sun's rays so much so with the free perflation of air, but also obstruct the sun's rays so much so that a good many houses are bereft of the advantage even at midday. The soil is alluvial, and the ground is damp throughout, but the people sleep on the damp Dwellings and Domestic cleansing. - Excepting a few floor on a hogla mat. pucca houses which are to be seen in all the thanas, the rest of the dwellings consist of the usual mat and thatch structures. They are situated in groups in the midst of gardens of betel, cocoanut and other fruit trees; and are so arranged that they enclose a large or small quadrangular courtyard. They are encumbered with goods and chattels and with various articles for domestic use, so that practically there is very little sleeping room left. Their floors and portions of the courtyards are swept daily and leeped occasionally; but the sweepings and other refuse are accumulated anywhere, according to convenience: generally in spots at little distance from the courtyards, in the backs of houses, in pits close by, under the adjacent trees, on the banks of small narrow khals, or in adjacent ditches and other excavations The accumulations on the banks of the khals or in ditches or other excavations are to a certain extent carried away by the diurnal tides, specially in Sarupkati, Jhalokati, and portions of Backergunge; but in

other places they constitute a great nuisance from decomposition, aided by the cookroom and other waste water being thrown on them, and also by slight showers in the beginning of the rainy season. They thus continue till the high floods remove them. In many villages a small excavation, called astakoor, is dug in a corner of the courtyard, or immediately below the house verandah, to form a receptacle for urine and waste water, which stink disgustingly. The cowsheds, which are generally wretched structures, are built in the rear of the sleeping rooms; their floors are damp and dirty, and the dung is heaped close to them. The habits of the people are filthy. They resort for defectation to the banks of rivers, khals, tanks, jungles, fields, and in the vicinity of their houses, and it is common to see them obeying calls of nature from boughs of trees overhanging the khals and tanks. General domestic cleansing, however, is better observed, on the whole, in Sarupkati and Jhalokati than in thanas Gournadi, Mendigunge, Nalchitti, Barisal and Backergunge, being specially bad in Nalchitti, Gournadi and Mendigunge. Roads.—These are sadly wanted in the villages. There are some main roads, such as Barisal-Backergunge, Barisal-Gournadi, Barisal-Nalchitti, Nalchitti-Jhalokati, Nalchitti-Monpara, Gournadi-Kaloopara, &c., but even these roads have been breached in many places and some of them are unbridged have been breached in many places, and some of them are unbridged. It is not feasible to construct proper roads without heavy cost, as innumerable rivers and khals have to be bridged. The rivers and khals are utilized in consequence as means of locomotion, and boats are kept by the people for moving about from place to place, and frail and unsafe chars or bridges constructed with bamboos, betel or cocoanut tree trunks, have been placed over khals for passing from house to house or village to village. Along the banks of some rivers and khals are to be seen narrow embanked foot-paths which are used by the boatmen for towing along boats, the breaches in these foot-paths being, as a rule, bridged over. *Drainage*.—Small narrow drain-like khals abound in Sarupkati and Jhalokati, and they serve to a certain extent the purposes of drains, and drain-like cuts, often made for denoting the boundaries of lands, serve the same purpose in Gournadi, Mendigunge, Barisal, Nalchitti and Backergunge; but they are often irregulary deep or shallow, and obstructed, and some of them contain filthy water with decomposing vegetation. Water-supply.—In thanas Backergunge and Mendigunge this is obtained from rivers, khals, tanks and putrid pools. Rivers and khals are utilised by those who live along or at a convenient distance from them, but being infested with crocodiles they are not largely resorted to. Moreover, their water becomes brackish in the hot months, as they are subject to diurnal tides, and their banks are to some extent resorted to for defeccation, and the water is charged with feecal and other as ded impurities. With regard to tanks, very many of them are extremely filthy. The few which may be considered good are private property, and the general public cannot, therefore, avail themselves of them, or where they are open to them, their distance procludes resort to them. So there is no alternative for the people but to use the filthy tanks within their reach. The good tanks are, moreover, indiscriminately used. The same sources, and in addition bhils, supply the drinking water in the rest of the thanas, with the following difference, viz., that in them there are no good tanks, and the river and khal water is not brackish; and that in Sarupkati, water is also taken from filthy ditches and excavations, and most of the khals, tanks which are small, excavations, &c., become dry during ebb tide, so that, in order to meet this drawback, kutcha wells are sunk in the beds of the tanks, &c. Bhils and putrid pools are resorted to in all these thanas by those who have no other we ter within easy reach. Disposal of the dead.—The prevalent custom in all the than as is that every Hindu must burn his dead on his own land, so the result is that cremation takes place on the banks of tanks or on spots close to houses. The Mahomedans bury their dead on the banks of tanks or in the compounds of The Joogies also inter their dead in their house compounds. Dead cattle are very often cast into the rivers and khals, and the nuisance is intensified where small khals are used, for during ebb tide the carcasses lie on the sides or bottoms of the khals, being impeded by branches of trees, and, if not devoured by birds of prey, are carried by the next flood tide into the tanks and ditches from which drinking water is taken. With regard to food, it is remarked that although there are so many rivers and khals containing fish, yet their

price is very high. Registration was tested in the manner laid down by the rules, and I noticed that the scrutiny was carefully made. General health was on the whole good. Recommendations.—Under this head the Deputy Sanitary Commissioner submits the following: That some legislative measure be early enforced in order to check the abominable insanitary conditions which now exist in the villages, as without it they cannot be rectified, and that the zemindars be compelled to give up lands to the villagers for use as burning and burial-grounds on the same terms as they are given to them for agri-

cultural purposes. INSPECTIONS.—Backergunge DISTRICT.— MUNICIPAL 240. Perozerore town.—This Municipality embraces several outlying villages by which its area is much increased, the town proper being small. Bolessur and the Damuda khal lie in its immediate vicinity on the west and north, and they are embanked to prevent the town being flooded. Dwellings and Domestic cleansing.—With the exception of the Government buildings. which are brick-built, the dwellings consist of the usual kutcha structures found in villages, but some of them are provided with corrugated iron They are situated on tolerably raised ground and in groups, but the houses in each group are crowded together and surrounded by fruit trees which preclude perflation of air. The house-sweepings and refuse are generally deposited in the rear of the houses, and the liquid refuse from the cook-rooms finds its way to the roads. The conservancy establishment consists of one supervising jemadar, and four mehters and five mehtrances for carrying out the provisions of Part IX of the Municipal Act, which is in force in some parts of this town, and three sweepers for road cleansing. There are no conservancy There is only one public latrine situated at some distance from or other carts. the river, constructed of planks, and containing three compartments. It is mostly resorted to by the boatmen and bazar people, and is exposed to public The private privies consist of machans with earthen receptacles beneath The night-soil is thrown into the river. Those who have no privies resort to the banks of the rivers and khals for defocation. The insanitary conditions usually prevalent in mofussil villages obtain in the village portion of this Municipality. There is, however, one municipal tank in village Sikarpore, but bathing, &c., is permitted in it. Roads.—The town is provided with pucca roads and foot-paths with the usual defective side-drains. They are kept tolerably clean in some places, particularly in the town proper. The side-drains are not used as latrines. Low jungle and bushes abound in some parts, and excavations exist which contain putrid water and rotting vegetation. Drainage.—This is defective. There are a few drains which are kept fairly clean. Water-supply.—This is taken from the river, khal, tanks and putrid pools. The river and khal water, although polluted, is considered to be good. There are two tanks which have been reserved for drinking purposes, good. There are two tanks which have been reserved for drinking purposes, but the falling leaves from trees in their vicinity pollute the water. Of the private tanks, only one is in good condition, but it is used promiscuously. The water from the putrid pools is used for domestic and other purposes. Disposal of the dead.—The Hindus burn their dead on the banks of the Damuda khal, far off from the dwellings, and the Mahomedans inter in the compounds of their Suggestions tendered.—The Municipal Commissioners were advised to provide a trenching ground for night-soil; to prevent the use of the water from putrid pools; and to provide conservancy and other carts. NALCHITTI town.—This town is situated on the right bank of the Nalchitti river, and two small khals pass through it; but it is above flood level. Its area is less than a square mile, and it is densely populated in some parts. Dwellings and Domestic cleansing.—There are a few pucca one and two-storied houses, but the rest consist of the usual mat structures, excepting that some have corrugated iron roofs. Some of the houses are built in lines and crowded together, with fruit trees around them obstructing perflation of air, while others stand in groups with free ventilation. Many of them are built on fairly raised plinths, and those of the poor are crowded with inmates. Cleanliness are

ved only in so far as sweeping and leeping the houses are concerned. There are no means for removing of house refuse and sewage; ditches and other

excavations abound, some containing putrid water; and much jungle and brushwood are to be met with. The cowsheds are generally wretched,

The roads are not properly swept, as there are only two filthy structures. sweepers, and no conservancy carts. There are no public latrines. There are two or three pucca private privies the night-soil from which is never removed; and defectation is generally carried on on bamboo machans crected for the purpose, near the roots of trees, from the boughs of trees overhanging drains, on the banks of tanks, khals, the river, or in any other convenient place. and Drainage. There are many pucca roads and foot paths, they are overhung with branches of trees. The drainage is defective. Some roads have no side-drains, while some have shallow surface ones; most of the drains are obstructed and defective in level, and, on the whole, they are insufficient for the requirements of the town. Water supply is taken from tanks and putrid pools. All the tanks are polluted by bathing and washing of utensils in them, and defeccation on their banks, and some are covered with jungle and receive the diurnal tide water, excepting the one near the police-station and two others which are less polluted. The water of the putrid pools is used for culinary and other domestic purposes. Disposal of the dead.—The Hindus burn their dead on the banks of khals at a little distance from dwelling-houses, and the Mahomedans inter in the jungle, but far from such houses. General health.—There was a good deal of fever in this town during the months of October and November. JHALOKATI town.—The Jhalokati khal runs through this Municipality, dividing it into two parts. The town proper, which comprises the largest portion, is on the left bank of this khal, and extends up to Gorudhar khal on the east. The Nalchitti river runs on the south, but the town is above flood level. Some portions of it are densely populated, and there is a large number of boatmen on the river. Dwellings and Domestic cleansing.— Excepting a few one and two-storied houses, which, however, are ill-ventilated and used as shops or godowns, the rest of the dwellings are of the same description as in mofussil villages; but some have tin or plank walls, and some corrugated iron roofs; and some of those in the town proper are crowded together, precluding perflation of air without, and ventilation within. Excepting the well-to-do, the habits of the people are filthy. The only point to which attention is paid is daily sweeping and casually leeping the house floors. The house-sweepings and other refuse are thrown anywhere: generally in the rear of the houses, in the drains close to them, or in the road-side drains, and they are usually in a decomposing condition, emitting a horrible stench from cookroom and other waste water finding their way to them. This state of matters lasts till the setting in of the rains, when the filthy collections are partially washed away. Surface cleansing cannot be properly attended to, as the establishment (two sweepers and no carts) is altogether inadequate for the many roads possessed by t' Moicipality. Defocation is carried on in the same manner as in Nalchitti and Perozepore. The market was in a very filthy condition, and the sweetmeats sold in it were very bad. Roads and Dramage.—There are several broad pucca roads and foot-paths, but their surfaces are uneven, and they are out of repair for want of funds. This causes much inconvenience, as there is much cart traffic on them. Branches of trees overhang them, and there are some hollows, excavations, &c., contain ing putrid water. The drainage is very defective. There are several drains, but they have not been systematically constructed, some being irregularly deep or shallow, and many wanting in proper outfall, obstructed by jungle, &c., and encroached upon by planks, &c., from the shops in front of them, with the result that the cookroom and other waste water thrown into them collects and stagnates beneath the planks. They are also used as latrines. Water-supply.—This is taken from rivers, khals, tasks, and putrid pools. The river and khal water is much polluted, being muddy and charged with suspended impurities, the numerous boatmen freely defocating in it. The tanks are promiseuously used; none are reserved for drinking purposes solely, and human forces and plantain and other trees are to be seen on their banks The water of putrid pools is used for culinary and other domestic purposes, but it is suspected that it is also drank by those who are too lazy to go for their water to a better source. Disposat of the dead.—The Hindus cremate on the banks of the Nalchitti river at the south-eastern extremity of the town, and there is a public burial-ground for Mahomedans in the north outside of municipal limits. The Byragies bury their dead within house

General health.—Fever prevailed, but not very fatally, in October compounds. and November.

241.

Noakall	i district.	1	Mymensing	district.	
Thanas.	No	. of	Thanas.	No	. of
	ville	ıges.			uges.
Sudharam	•••	3	Bazitpur	•••	16
Begungunj		1	Agursindu	•••	10
Lakhipore	•••	3	Kishoregunge	•••	15
Ranigunge		2	Kendua		4
Fenni	•••	4	Durgapur	•••	11
Chhagalnaiya	•••	1	Netrokona	••	5
Bamni	•••	2	lawargunj		4
Hatia	•••	1	Fulpore		4
Sundip	•••	2	Mymensing	***	4
			Jamalpore	***	5
	Total	17	Sherpore	•••	6
			Dewanganj	• • •	5
Tipperak	district.		Gafarganj	•••	G
Daudkandi		3			
Muradnagger	•••	2			_
Comillah	***	4	Total		95
Nobinagar		2			
Brahmanberia	.	17			
Kasba	•••	10			
Chaddagram	•••	3	,	21.4.1.	
Laksham	•••	5	Faridpore.	aistrice	
Chandina	100	5	Shibchar		5
		==	Polong		. Š
	Total	51	Madaripore	***	17
		_	Maksadpore		11
Dacea	district.		Bhanga		8
		10	3		
Kernnigunge	•••	10	Total		49
Narayangung		5 11	,		-
Srinagor	-10	- 6			
Nababgunge	•••	18			
Harirampur	•••	9	•		
Manickgunge		8			
Jufarganj	•••	15	i		
Sabh r	•••	77			
Munshi zunj	••	26			
Rupganj	•••	3	}		
Kapasia Dalam	•••	12			
Raipur	•••		1		
/D	41	13/1	İ		

Assistant Surgeon Doorga Dass Roy, Deputy Superintendent .- This Officer's sanitary inspections extended over eight Municipalities and 342 villages in the thanas in the districts marginally His report on the subject is very general, but concise. It would not, however, have lost in value had it dealt with the sanitary status of each thana separately.

242. Noakhali, Tipperah, Dacca, Mymensing and Faridpore. -- The villages of Eastern Bengal are of two classes, viz., those situated on high and those on low ground. The former are, as a rule, to be found in those portions of thanas Chhagalnaiya, Chaddagram, Comillah, Kasba and Brahmanberia in Tipperah, and of thanas Durgapur, Fulpur, Sherpur thanas Durgapur, Fulpur, Sherpur and Dewanganj in Mymensing, which are in the vicinity of hills. The principal feature of these villages is their comparative dryness, due to their being The latter, or not much water-logged. the low-land villages, are of two kinds, viz., those situate on lands lying along the sea or rivers in their lower course, and those which belong to lands high and are yet low by reason of their occupying the abandoned beds of some extinct The villages of the first order are in the southern parts of the Noakhali district, and on the Meghna, the Brahma-

putra or Jamuna, the Dhaleshwari, the Padma and other rivers. Those of the second kind are to be found in certain parts of thana Muksudpur in Faridpur, in thanas Kasba, Brahmanberia, Nobinagar, and Muradnagger in Tipperah, in thanas Bazitpur, Kishoregunge, Kendua, and Sherpur in Mymensing, and in thanas Keranigunge, Sabhar, Rupganj, Kapasia, and Raipur in Dacca. The villages lying near the Bhowal and the Madhupur jungles in Dacca and Mymensing, respectively, belong also to this category. The Deputy Superintendent submits the above details, because he believes "that these several conditions variously affect the health of the people. Admitting fully that conditions favorable for the production of malaria abound in almost all the villages of Eastern Bengal, it may yet be maintained that, other circumstances being equal, it will be found (1) that the higher the elevation is, the more healthy the villages are, and (2) that the more the villages are water-logged, the more unhealthy they are. The proverbial unhealthiness of some of the Bhowal and the Mudhupur villages supports the latter view; and a good illustration of the former was furnished by a circumstance noticed by me in the course of my tour in December last. As I was proceeding through thanas Srinagar and Nababgunge to Harirampur, I first heard of cholera in Raizda, an old village in Srinagar. The disease here was no doubt of a very mild form; but as the report came to me it was more severe in Sholaghar, another village in Srinagar. However, to speak from my own experience, the disease was pretty severe in Agla, Barra, Kashimpur, &c., in thana Nawabgunge. As I proceeded up the stream (Isamuti nudi) the severity of the disease became gradually lessened until in some villages of thana Harirampur it had not appeared at all. Other factors there may have been at work; but the geographical position of the villages was the one which attracted my notice." Habits of the people.—Under this head the Deputy Superintendent makes the following observations; I give his own words:—"The case is really bad with the class

known as the 'upper.' Having sufficient means at command, they have neither to work with the hand nor labor with the brain, and life must indeed be a burden to them. Things have, however, reached that point from which re-Indeed the signs of re-awakening are visible at almost every action is inevitable. turn, and the day perhaps is not far distant when the zemindar will give up his hubble-bubble and the pillow in favour of some active pursuits of life. "Roads and Drainage.—Excepting in very large and populous villages, the necessity for roads s not felt to be so great as it is in towns. And it would have been still less if it were not for the interference by trees and bamboo clumps with free perflation. Where roads exist they are generally devoid of side-drains and openings for passage of water, hence surface drainage is seriously obstructed. Water-supply.—The question of a pure water-supply for villages is daily assuming a more and more serious and pure water-supply for villages is daily assuming a more and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and more serious and serious an ing a more and more serious aspect. Excepting the instances in which the villages are on the river sides, or in which there are good tanks and wells, the great bulk of them suffer from want of water. The changes which are constantly at work have altered the physical aspect of many of these villages, for those which at one time were watered by large and deep streams are not now benefited by them. Silting is likewise busy in filling up large and good tanks in those villages which are subject to annual inundations. Many villages, again, are too poor to be able to provide themselves either with tanks or wells. In these the people are driven to use water which, to say the least, is not fit for even the lower animals. Conservancy.—The question of village conservancy in Eastern Bengal resolves itself into simply removing house-sweepings and refuse, and securing surface drainage. These are not very difficult tasks when we consider what has been done in towns. But simple as these measures are, there are practical difficulties to be overcome in giving effect to them in villages. They involve expenditure, and this is not favourably viewed by the villager; they are innovations, and he cannot interfere with matters handed down to him by his forefathers; he has not the moral courage to do what his neighbour will not do; and he is apathetic and indifferent, although there is no doubt that he is not so obtuse as not to understand that insanitary surroundings are injurious to The Deputy Superintendent, under these circumstances, suggests that Government should help the people in different ways, and among them by passing a mild law which would make it incumbent on all to keep their houses clean. Disposal of the dead .- A law like that suggested above would also, the Deputy Superintendent thinks, do away with the evils associated with both cremation and burial, especially the latter. He has repeatedly pointed out to the Mahomedans the wrong they do to themselves and their neighbours by burying their dead in close proximity to dwelling-places, but the result "has always been a deep sigh of de pair and despondency." They seem to know that they have done wrong; but they also know that they lack the power to do away with custom.

243. BEHAR CIRCLE.—Assistant Surgeon Mothura Nath Sen, Deputy Sani-

S	huhabad	l district	.	Patna	district		
Thanas.			No. of illages.	Thamas.		No. of villages	
Arrah			24	Manair		15	
Belouti		•••	4	Bikram		12	
Dumraon	•••	•••	7	Masauri		6	
Buxar	•••		14	Futwa		15	
Peroo		•••	12	Hilsa.	***	17	
Dhangaon	•••		8	Chandi		5	
Derri		•••	2	Ataserai		11	
Kharkner		•••	16	Bohar		6	
Sassering	***	•••	15	Silao		ő	
Mohan.a	•••	•••	57	Barrh		9	
Bhabuah	111		62	Mokameh	***	1ŏ	
				TIT O II COLLEGE	•••		
T	otul	***	216	Total		112	
•		_			•••		

tary Commissioner.—The sanitary inspections of this Officer embraced eight towns and 328 villages in the thanas in the districts named in the margin. His report is a fair one, and furnishes some interesting information; and although the particulars relating to both the above districts are given together, the distinguishing features appertaining to each thana in them have been brought out. A resumé there-

of is subjoined.

244. Shahabad and Patna Districts.—The Shahabad district is separated from Patna by the river Sone, has the Ganges on its north, the river Karmanasha on the west, and the Kymore range of hills to the south. It is intersected by several smaller channels, and there is a network of irrigation canals in the low-lying tracts, such as thanas Dhangaon, Kargher, Peero and

Dehri, the northern portion of thana Sasseram, the southern portion of thanas Buxar, Dumraon, Belouti and Arrah, the Keri and Dhansoi outposts of Buxar thana, the Noanagar outpost of Qumraon thana, and the Jugdispore outpost of Belouti thana. In the eastern portion of the Mohaniah thana there are a few distributaries of the same canals. The northern portion of the district, i.e., the northern portion of thanas Buxar, Dumraon, Belouti and Arrah, are comparatively elevated. Patna.—The Rajgir range of hills lies on the north-east corner of this district, (i.e., on the south of thanas Behar, Silao, and Ataserai,) and the river Ganges on the north. It is intersected by several smaller channels, and there are irrigation canals in thanas Bikram, Manair and Bankipore. Dwellings.—The dwellings both in Shahabad and Patna are constructed of mud walls with tiled or thatched roofs, with defective ventilation everywhere, and overcrowding of inmates at night generally, particularly in the houses of the poorer classes. The floors of the houses are dry, excepting during rains, and they are swept daily together with the angun or compound in front of them: but their surroundings are filthy. The fluid refuse passes through the house drains to the foot-paths between the rows of houses, where it partly soaks into the soil and partly evaporates. The cattle sheds in almost all the villages are built close to the dwelling-houses, but they are cleaned daily, and ash is sprinkled on their floors at intervals to keep them dry. The ordure of the cattle is dried in cakes, called goita, and used as fuel, firewood not being available in these districts. There is, however, a difference in this respect in the Bhabuah and Mohaniah thanas in Shahabad where the Kumars, or potters, generally collect the dung in heaps, part of which is washed away by rain, and the remainder used as fuel when dry. Conservancy.—The habits of the people generally in both the Shahabad and Patna districts are very filthy. Conservancy arrangements do not exist in any village, and defectation here and there, and everywhere, is general. The pardanashin females in thanas Futwa, Hilsa, Chandi, Ataserai, general. The pardanashin females in thanas Futwa, Hilsa, Chandi, Ataserai, Silao, Behar, Barrh, and Mokamen in the Patna district generally case themselves on any plot of ground within the house compound. Sundasses or well-privies are to be met with here and there. In some places the house sweepings and refuse are accumulated, and used as manure when required. The pigeries in almost all the thanas, and the pigs cause much nuisance. There are general rule in Shahabad and Patna for the dead cattle to be taken by the chamars, who, after removing the skin and flesh, throw the bones, &c., close to their houses, which are sometimes sold when dry. Roads.—Excepting the district roads, there are no properly constructed roads in any of the villages communication being carried on by narrow footpaths. There are matny roads in the Patna district constructed by the Road Cess Department, bu most of them are kutcha, a few only having been partially metalled. The different police-stations and the large and much-frequented bazars are connected with one another by them, and in the Manair thana in the Dinapore sub-division many fair-weather roads connect one village with another. The trees which were planted on the roadsides have died away in some parts, and the Futwa to Hilsa and the Baktiarpore to Behar roads require additional waterway, though in ordinary seasons there is no obstruction to the flow of water. Shahabad district the roads are comparatively few, but the main roads are well metalled; the Grand Trunk Road runs from east to west through the Dehri, Sasseram, and Mohaniah thanas, and the trees planted on the road sides are in a thriving condition. Drainage. - Patna-In the northern portion of thanas Futwa, Barrh and Mokamen, which are situated on comparatively high ground, the natural drainage is fair; but the southern portion being very low, is flooded during the rains, and the high alungs or bunds, which exist in almost every village in it for the protection of the paddy crops, impede natural drainage to a great extent. The alungs also interfere much with the drainage of the Silao, Behar and Ataserai thanas situated in the Terai- of the Rajgir hills, and with that of the Masouri, Hilsa and Chundi thanas. The Futwa to Hilsa road and the Bakhtiarpore to Behar road impedevery much the drainage of the western portion of thanas Futwa, and BARRH: and the canal embankments are said to interfere with the drainage of the Paliganj outpost in the BIKRAM thana, and of its southern portion which is low and flooded by the overflow of the river Poonpoon with a jallah or jhil on

the east; and with that of the low-lying eastern portion of Manair thana situated on the east bank of the river Sone. The pits and excavations which are dug for the construction of mud houses almost in every village in the abovementioned thanas generally receive the surface drainage, which remains until it is dried up by evaporation, and the village pathways generally throughout serve the purposes of drains. There is no obstruction or impediment in any of the hill streams or rivers which run through the abovementioned thanas, excepting in the river Mohaney in CHANDI thana, where a bund just below village Jogia obstructs its course. In the Shahabad district the embankments of the network of irrigation canals which exist in the following places appear to impede their natural drainage, viz., the northern portion of thanas Sasseram and Bhabuah, the Kheri and the Dhansoi outposts in the Buxar thans, the Noanagar outpost in the Dumraon thana, the Jugdispur outpost in the Belouti thana, the western portion of Peroo thana, the eastern portion of Mohaniah thana, and the whole of Dhangaon and Kargher thanas together with their outposts, which represent the depressed basin between the hills on the south, the river Ganges on the north, the river Sone on the east, and the river Karmanasha on the west, and contain a number of small hill streams or rivers. No impediment or obstruction was noticed in any of the above-noted hill streams or rivers. The northern portion of thanas Buxar, DUMBAON, BELOUTI and ARRAH, and the eastern portions of thanas DEHRI, PEERO and ARRAH, are situated on the banks of the rivers Ganges and Sone, and are comparatively high, and hence their drainage is good. The Sinaha outpost in the Arran thana and the northern portion of the Koilwar outpost are flooded by the overflow of the river Ganges; but on the fall of the river the water passes off without any obstruction. The pits and excavations which exist in the villages generally, receive the surface drainage, and, being undrained, allow the water to soak into the soil or to evaporate; but the excavations in the low-lying tracts are, when they dry up, replenished again by canal water. Water-supply.—In thanas Behar, Silao, Ataserai, Hilsa, Chandi, Masaurhi and Manair in the Patna district, and in thanas Dhungaon, Sasseram and Kharcher in the Shahabad district, only well water is used both for drinking and other domestic purposes; while in thans Mokamen, Barrh, Futwa and Bikram in the former district, and thanas Dehri, Peroo, Arrah, Belouti, Dumraon and Buxar in the latter, river water is utilised in addition to that of wells; and in thanas Bhabuah and Mohania in **Shahabad** tanks, in association with the rivers and wells, also form the source of water-supply. The water from the rivers cannot be said to be pure, as partially burnt dead bodies are cast into them, excepting in the river Durganti, and bathing and washing in them and defeecation on their banks take place. The water of the tanks is also polluted by bathing and washing and detecating on their banks, and by the entry into them of surface drainage. The wells are for the most part situated on raised ground, and their margins provided with parapets; but the parapets are, with few exceptions, nowhere well cemented or plastered, and bathing and washing are performed near them; hence their water is not above suspicion. Disposal of the dead .- In thanas Barrii, Mokamen, Furwa and Manair in the Patna district, and in thanas Belouti, Dumraon, Buxar, Dehri and Arrah and with its Koilwari outpost, in the **Shahabad** district, the Hindu dead are cremated on the banks of the Ganges and Sone, but the process is not completely gone through, as in most cases the faces are disfigured and the bodies are then thrown into Here the cholera dead are also cremated. In the remaining thansa of Patna and Shahabad the dead are cremated on the fields or waste lands close to the village, or on the sides of the nearest rivulet, and the bodies appear to be thoroughly cremated. In **Shahabad** the villagers generally subscribe for firewood or goita for burning the bodies. In this district the pauper dead and the dead Hindu children are cremated, but in Patna they are generally buried. The Mahomedan dead are buried in both districts close to the villages, each family or each sect having a separate burial-place of its own. It was noticed that in village Denowa in thana Bhabhan the burials take place within the house compounds. Clothing.— The people in both Shahabad and Patna are inadequately clothed, and the clothes of the lower classes are very dirty for want of washing. Registration.—This subject was attended to; but it appears that much

difficulty is experienced in collecting the information, as the people are not inclined to furnish it, particularly in the presence of the chowkidar, as they suspect that this functionary would get them into trouble. The result is that much time is occupied in obtaining the data to the detriment, to a great extent, of other work. General health.—The general health in the Patna district was on the whole fair, but that in the Shahabad district was unusually bad. During the last four months of the year a widespread outbreak of malarial fever prevailed in, and was present throughout it, in some parts assuming epidemic proportions, owing, it is believed, to heavy rainfall. It made its appearance in August, and increased greatly during the months of September and October, and lasted through December. It attacked people living both on the elevated and low tracts, and hardly any of the villages escaped its visitation: nor did sex, age and condition of life inclined to furnish it, particularly in the presence of the chowkidar, as they of the villages escaped its visitation: nor did sex, age and condition of life modify its incidence. Thanas Dhangaon and Khargher, the northern portion of thanas Sasseram and Bhabuah, the eastern part of thana Mohaniu, the southern portion of thanas Buxar, Dumraon, Belouti and Arrah, and the western portion of thana Peroo, suffered the most. The fever was of the usual intermittent type, accompanied by the usual complications and sequelæ, and seldom lasted for a long time; but relapses were frequent. Advice tendered.—The need for, and the benefits of sanitary reform were explained to the people, and the chief defects were pointed out; but they heard all that was said with much indifference, and those who recognized the importance and utility of the suggestions, said that it was impossible to carry them out in rural villages. Suggestions.—The Deputy Sanitary Commissioner submits the following suggestions for the rectification of defects:—(1) To stop the objectionable practice of promiscuous defectation, limiting it to the fields outside and at a safe distance from the villages. (2) To prevent the accumulation of refuse, &c., within the village. (3) To set apart one or two wells solely for drinking purposes. (4) To cause the pits and excavations to be filled up. (5) To cause the dead to be cremated completely. (6) To plant trees on the roads.

town.—The chief defects found in this town are:—The dwelling-houses are devoid of ventilation; the Roads, excepting a few, are unmetalled and not provided with side-drains, and there is much encroachment on the Bazar road; the Drainage is defective; the Water-supply arrangement is not good; the arrangements connected with the Disposal of the dead are imperfect, there being no municipal burial-ground or burning ghât; the Conservancy arrangements are unsatisfactory, the private latrines consisting for the most part of sundasses or well-privies, and cess-pools or reservoirs for fluid refuse, which are not cleaned, existing in most of the houses. Suggestions.—(1) To raise funds for the construction of shallow pucca drains along the roadsides. (2) To induce the people to use the public latrines instead of obeying calls of nature on the outskirts of the town. (3) To make every endeavour to suppress the well-privies. (4) To take the necessary measures to abolish or keep the cess-pools clean. (5) To provide two plots of land at a safe distance from the town—one for the burial of the Mahomedan dead, and the other for the burning of the Hindu dead, and to see that cremation is thor-ughly carried out. (6) To pay closer attention to the filling up of pits and excavations. (7) To provide all the public wells with iron buckets and chains. (8) To pay greater attention in keeping the lanes and bye-paths properly clean. Sasseram town.—In this town the dwelling-houses are wanting in ventilation; the roads are metalled, but are narrow; the drainage is defective; the roadside drains do not serve, their intended purpose; the water-supply arrangements are not satisfactory; the conservancy arrangements are much neglected; there are cess-pools attached to most of the houses, and sundasses or well-privies are general; there are public latrines, but they are not generally used by the people, who prefer to defecate everywhere; the night-soil is not properly trenched; there is no appointed burial-ground or burning ghât, nor is there as mu

should be properly drained. (3) The people should be induced to use the public latrines, so that promiscuous deforcation may cease. (4) The night-soil should be properly trenched in pits dug about one foot deep and one foot soil should be properly trenched in pits dug about one foot deep and one foot wide in lines, and the foeces put therein covered with earth six inches deep. (5) The sundasses or well-privies to be closed. (6) The cess-pools to be cleaned. (7) An iron bucket and chain to be attached to each public well for drawing water, to obviate promiscuous dipping of water pots. (8) To establish a municipal slaughter-house. (9) To provide a burning place at a safe distance from the town. (10) To fix a burial site for the Mahomedans at a convenient place. (11) To stop the practice of bathing and washing in tanks the water of which is used for drinking. (12) To carry on vaccination vigorously. Bhabuah town—In this town the sanitary condition of Khalaspore, of Sinu and of the old Bhabuah village is completely perfected; the drainage is defective. of the old Bhabuah village is completely neglected; the drainage is defective, there being hardly any drains; there are no public latrines; the people generally defecte anywhere; there is no municipal slaughter house, nor any appointed burial-ground or burning ghát; the water-supply is bad, and no tanks or wells have been set apart for drinking purposes. Suggestions.—(1) To provide all the wells used for drinking purposes with iron buckets and chains for drawing water. (2) To increase the conservancy establishment, so that all requirements may be properly attended to. (3) To provide land for trenching night-soil. (4) To fix a burning place for the Hindus at a safe distance from the town. (5) To provide a burial-ground for the Mahomedan dead. (6) To construct a few latrines in the different mobullas, to prevent promiscuous defectation. (7) To keep tank water well protected from pollution. (8) To construct shallow drains along the roadsides. (9) To keep the kutcha roadside drains perfectly clear. (10) To improve the sanitary condition of Khalaspore, Sinu and the old Bhabuah village, or Gavi as it is called. (11) The lanes and bye-lanes should be properly swept. (12) Not to allow the fluid refuse to pass along the house drains to the roadside. (13) To dispose of the fluid refuse properly. (14 To utilize fully the provisions of the Compulsory Vaccination Act when it shall have come into force. Buxar town.—In this town the drainage is defective; pits and excavations receive the surface drainage which stagnates, and the few drains that exist are deep and dangerous; the conservancy arrangements are much neglected; the lanes and bye-paths are not swept; the public latrines, only 4 in number, are not in a good condition; promiscuous defectation is general; the water-supply arrangements are not satisfactory; the dead are cremated both above and below the stream of the river Ganges; the burial of the dead of a class of people, called Dorindassi, is carried on within the enclosures of houses; there is no appointed slaughterhouse; the offal, &c., of slaugicered sattle are thrown into a pit near Chamartolla; and no burning-ghat has been provided. Suggestions.—To construct pucca shallow drains along the roadsides. (2) To keep the bye-paths clean. (3) To fill up the pits and excavations with sweepings instead of selling them. (4) To keep the river bank perfectly clean. (5) Not to prevent cremation of the dead on the banks of the river. (6) To stop burying the dead within the enclosures of houses. (7) Not to allow the domes to take the clothing of the deceased, which should be burnt along with the bodies. (8) To see that the dead are thoroughly cremated. (9, To supply some of the wells from which water for drinking is drawn with buckets and chains. (10) To bury the night-soil in trenches one foot wide and one foot deep. (11) To cement the floors and walls of the public latrines, and to tar them at least twice a month. Jugdishpore town.—The roads in this twn, excepting one, are unmetalled, and not provided with side drains, nor are they swept; the drainage is defective; the drains on the sides of the metalled road are deep and full of fluid refuse; the water-supply is not above suspicion: the conservancy arrangements, are quite unsatisfactory: above suspicion; the conservancy arrangements are quite unsatisfactory; there is not a single public latrine; defectation is permitted anywhere and everywhere; the arrangements connected with the disposal of the dead are very unsatisfactory, there being no appointed burial-ground and burning-ghât; and the tanning of hides is carried on within the town. Suggestions.—(1) To strengthen the conservancy establishment, so that all the conservancy establishment. vancy requirements of the town may be properly attended to. (2) Not to allow the cultivating classes to accumulate refuse, &c., in front of their houses. (3) To

provide public latrines, so that the people may not defecate on the roadsides as well as in nooks and corners. (4) To pay particular attention to the keeping of the roadside drains perfectly clean. (5) To provide a plot of land for the trenching of the night-soil, and to avoid deep trenching. (6) To provide barrel carts for the removal of fluid refuse, and to trench the refuse properly. (7) To see that the lanes and bye paths are properly swept. (8) To set apart some of the pucca wells for drinking purposes, and to supply them with iron buckets and chains for raising water. (9) To provide land at a safe distance from the town for the burning of the dead. (10) To provide ground at also a sufficient distance from the town, as well as away from any sources of watersupply for burying the Mahomedan dead. (11) Not to allow the clothing, &c., of the dead to be taken by the domes. (12) To exercise supervision over the sale of meat and fish in the bazar. (13) Not to allow tanning of hides within the town. (14) To induce the chamars to bury the bones of the dead cattle appropriated by them. Patna District.—Behar town.—The roads in this town, excepting a few, are unmetalled, and not provided with side drains; the drainage is very defective; there are pits and excavations which receive the surface drainage; the water-supply is not good; well water is used for all domestic purposes; the conservancy arrangements are neglected; the byc-paths are not properly swept, and defeecation takes place on their sides and everywhere; the public latrines are kept unclean, and their floors and walls are not tarred; the private latrines which exist are mostly sundasses or well-privies; the night-soil is trenched in deep trenches; the offal, &c., of the slaughtered cattle are not properly disposed of; there is no appointed burial or burning-ghât; the sanitary condition of the outlying mohullas is entirely neglected. Suggestions .-(1) To make the conservancy establishment perform their duties efficiently.
(2) To utilize the sweepings in filling up the pits and excavations, taking in hand such a number at a time as can be filled up within a given time.

(3) To suppress the well-privies. (4) To trench the night-soil more carefully (3) To suppress the well-privies. (4) To trench the night-soil more carefully than is at present done, avoiding deep trenches and trenching on the bank of the river, or in its bed. (5) To stop promiscuous defectation. (6) To induce the people to use the public latrines. (7) To provide more public latrines at convenient places, and to keep the existing ones properly clean; to tar their floors and walls at least twice a month; and to provide two gumlas to each of the cells. (8) To establish a burning-ghat and a general burial-ground at a safe distance from the town, and to see that the dead are thoroughly cremated. (9) To keep the lanes properly clean. (10) To set apart some of the wells the water of which is reputed to be good, solely for drinking purposes. (11) To provide each of the public wells with an iron bucket and chain for raising water. (12) To entertain at least two vaccinators to keep the town thoroughly vaccinated. (13) Not to allow ex-inoculators to work within the town. BARRH town.—The roads in this town, excepting two, are unmetalled, and not provided with side-drains; the drainage is defective; pits and excavations exist and receive part of the surface drainage; the watersupply arrangements are not quite satisfactory; the lanes are not swept; there is no public latrine for females; the poorer classes defeecate everywhere; the private latrines consist mostly of sundasses or well-privies, and cess-pools are attached to most of the houses; and there is no appointed slaughter-house or burialplace or burning-ghat. Suggestions. -(1) To utilise the sweepings in filling up the pits and excavations, taking one at a time and thoroughly filling it up before proceeding to another. (2) To provide more public latrines at convenient places for males as well as for females. (3) To keep the lanes and bye-paths clean. (4) To stop the practice of promiscuous defectation. (5) To make arrangement to remove the fluid refuse from private houses. (6) To suppress sundasses or well-privies. (7) To establish a slaughter-house. (8, To provide a general burial-ground.

246. SANITARY INSPECTIONS OF THE SUBORDINATE STAFF IN THE BEHAR CIRCLE.—The Inspectors and Head Vaccinators submitted reports about the sanitary condition of villages visited by them. Their inspections extended over 949 villages in thanas Bhabuah, Mohania, Kharyher, Sasseram, Buxar, Dumraon, Belouti, Peroo, Dhangaon and Arrah in Shahabad and thanas Bankipore, Manair, Bikram, Massaurhi, Futwa, Barth, Mokameh, Hilsa, Ataserai, Chandi, Behar and Silao in Patna. The reports drawn

up by them are very meagre, and there is nothing in them sufficiently interesting to occupy a place here.

247. ORISSA CIRCLE.—Apothecary P. Veeriah Naidu, Deputy Sanitary

Cuttack district.		Puri district.				
Thanas.		No. of villages.	Thans	ı.		No. of villages,
Cuttack Jagatsingpur Tirtol	•••	211 71	Khurda Banpur	š	•••	123 87
Jajpur Dhormsala	•••	38 10 71	Total		•••	160
Keudrapara Patamundai Aul	•••	. 7				
Salipur	•••	10				
Total	•••	432	Angool	•	•••	3

Commissioner.—This officer visited, for sanitary inspection, one town and 595 villages in the thanas in the districts marginally cited. His report, an abstract of which is subjoined, furnishes a fair account of the localities inspected by him.

248. Cuttack DISTRICT.—CUTTACK thana.— Dwellings and Domestic cleansing. Almost all the villages in this thana are situated on fairly elevated good ground. A few of them are surrounded by mango

The dwelling-houses are crowded but freely ventilated. topes and low jungle. Personal cleanliness is limited to bathing. The cattle-sheds are situated within the inner yards, and none of them are perfectly clean. Conservancy does not exist in any of the villages. Sewage and refuse, &c., are heaped up in and around houses, and on the surroundings of villages. The people resort in and around houses, and on the surroundings of villages for obeying the calls of nature to jungles, fields, roadsides, surroundings of tanks and any other available place. Drainage is defective. The kutcha roads and foot-paths often serve as drains. Water-supply.—This is obtained from rivers, wells, tanks and running streams. The water of the wells is generally good; that from rivers is often, during outbreaks of epidemic disease, such as cholera, small-pox, &c., contaminated by the burning and burying of the dead on their banks. Disposul of the dead.—The dead are buried and burnt far from villages and sources of drinking water, near jungles, in fields, on open plains and beds of vivers, and are sometimes thrown into rivers. The dead cattle are thrown on the fields or into ditches. General health was, on the whole, good. JAGATSINGPUR thana.—The sanitary condition of the villages in this thana is the same as that of those in the Cuttack Sudder thana under all The only variations are in regard to water-supply, which is plentiful in each of the villages, exceeding that of many villages in the Sudder thana, and being better in quality. Besides wells, tanks and rivers, main and sub-canals combined together meet the demand. Much difficulty was experienced in dissuading the people from using the surroundings of tanks as latrines which is customary, not only in this thana, but in all the thanas throughout the interior of Orissa. General health was good, exc. 'I Chuklipara, where malarial fever was prevalent during the last quarter of the year, owing to unusual rainfall. Tirror thana.—Many villages in this thana are situated on low levels. The dwelling-houses are overcrowded and ill-ventilated. Negligence in personal cleanliness, carelessness in adopting proper means for removal of sewage and refuse, imperfect way of cleaning the court-yards and surroundings of houses and cattlesheds, and impurity of water-supply,—all these combinedly constitute a source of unhealthiness in this thana. Cowdung and cow-house litter are generally accumulated in ditches behind houses for manure. General health.—Fever, attributed to heavy rainfall, was prevalent prominently in village sobha during the months of October, November and December last. JAIPUR thana.—It is gratifying to read much of the following report regarding this thana. The sanitary condition of the villages is satisfactory. No defects, worthy of mention, exist in the situation of its villages and construction of the dwellings, except that ventilation is defective, as most of them have been rebuilt after the last cyclone. The roads and streets are kept clean; the drainage is fair; the people resort for calls of nature to fields, river-sides or other available places; the water-supply is abundant and good; conservancy is, however, absent from all the villages; the deed cattle are thrown into fields and beds of rivers, and sewage and refuse are cast into khals. The dead are buried and burnt far from villages and sources of drinking water. Food sufficient. General health was good. Dharmsala thana.—The villages of this thana are situated, some on elevated and some on low lands. Lwellings.—The houses are crowded and defective in ventilation. Roads are used as drains, and are generally kept unclean. Water-supply - Tanks, jhils and khals are in many villages the

sources of water-supply, but their water is very indifferent, and is believed to cause diseases; such as cold, cough, fever, dysentery and bowel-complaints. Domestic cleansing.—Personal cleanliness is neglected. The cattle are kept in the compounds of houses. Sewage and refuse are generally accumulated in ditches near the villages. The surroundings of tanks, fields and low jungles Disposal of the dead.—The dead are cremated and interred are used as latrines. far from the villages and sources of water-supply. Salipur thana.—Dwellings and Domestic cleansing.—The villages are situated on fairly elevated ground. Almost all the dwelling-houses are made of mud. They are ill-ventilated; but their interior and court-yards are kept clean. The cattle-sheds are situated within the outer yards, but the cowdung and refuse matters are heaped behind houses. Conservancy nil. The roads are used as latrines during night. Drainage is very defective. The roads and paths serve as drains. Water-supply.—Wells and tanks supply this; the well water is good, but the tanks are unprotected. Disposal of the dead.—The burying and burning places are far from each village and its sources of drinking water. The dead cattle are thrown into fields or ditches. General health was good. Kendrapara thana.—Dwellings and Domestic cleansing.—The villages in this thana are situated, some on elevated and some on low ground. The floors of some houses are subject to ground damp, and ventilation is generally defective. The cattle-sheds and court-yards are kept unclean, and refuse, &c., are thrown on the sides of, or accumulated Water-supply is behind, houses. The Roads are kutcha, narrow and filthy. taken from wells and tanks, which are not properly protected from pollution. Disposal of the dead.—The burning and burying places are far from the villages, and it was noticed that corpses are in some villages devoured by jackals in the course of a day, and nothing but the skeletons are found lying on the ground on the next day. The dead cattle are thrown on the outskirts of the villages. General health was good, except that fever and dysentery prevailed in a few villages, attributed to bad water. PATAMUNDAI thana.—The situation of the villages in this thana, the condition of the dwelling-houses with respect to their floors and ventilation, the housing of cattle, and the disposal of refuse matters bear a close similarity to those obtaining in the Kendrapara thana. There are no pucca roads. The paths which serve the purposes of drains are kept clean. The water-supply is obtained from rivers, wells and tanks. The river water is contaminated by burying and burning of dead bodies on its banks. The wells are everywhere protected from inward drainage by means of good parapets. The conservancy arrrangements are nil throughout; the people defœcate wherever they find it convenient to do so, and refuse matters of all descriptions are thrown into ditches. Firewood being very dear in this part of the country, the great bulk of the people are unable to afford sufficient fuel for burning their dead, and the bodies are, therefore, slightly burnt and then thrown into the rivers. General health was good. Aul thana. - The houses in many villages are subject to ground-damp during floods and heavy rains, their floors being almost on a level with the surrounding country. The cattle-sheds are close to houses, but are kept clean. The village roads are simply narrow foot-paths between the rows of houses, and serve both as pathways and drains. With regard to the arrangements relating to water-supply, conservancy, disposal of the dead and food, no difference exists between this thana and thana Patamundai. General health was good. Registration was tested in the manner required by the rules, but the scrutiny was insufficient. Advice tendered .- The Deputy Sanitary Commissioner reports that he explained the benefits of observing sanitary precautions to the people, and pointed out the defects which affected health, and that (what is very remarkable) such defects were at once partially or wholly rectified.

249. Puri District.—Khurda thana.—Dwellings and Domestic cleansing.—A great number of the villages in this thana are situated generally on high ground, and jungle abounds in many of them. Ventilation is free, though overcrowding of inmates exists in many dwelling-houses. The pathways and the surroundings of the houses are kept filthy, and conservancy is absent. Drainage is defective there are no drains. Water-supply is taken from tanks, which are subject to surface pollution, and many of which dry up during the hot season. General health.—The villages which are surrounded by jungle appear to be subject to fever, specially at the commencement of the cold season.

Banpur thana.—Many villages in this thana are situated along the coast of the Chilka lake, the residents being fishermen. Those which are situated near hills, jungle and marshy places, are very unhealthy throughout the year, but those which lie on two sides of the main road to Madras generally enjoy good health. Dwellings.—The houses a great number of in the villages are subject to ground damp, the floors being on a level with the surrounding country. Drainage.—There is no system of drainage: the roads serve the purposes of drains. Domestic cleansing.—The roads are kept filthy; cattle-sheds are situated within the compounds of houses, and are often unclean; and the sewage and refuse are thrown into ditches near the villages which, when rotting, emit intolerable stench. The water-supply is had from wells and tanks. The former are nowhere protected, and the latter, though they supply good and sufficient water, are in some places little cared for. It was noticed in village Kunda Chungudia that bathing water was allowed to flow into the wells. Disposal of the dead.—The burning and burying ghâts are in some places too

close to the villages.

MUNICIPAL INSPECTION.—ANGUL town.—Dwellings Domestic cleansing.—This town is situated on fairly elevated ground. The dwellings form two lines with a broad pucca road, between extending to a length of one mile, and are freely ventilated. The cattle-sheds are situated close to the houses, and their dung and urine are removed and heaped up behind each house. There are no conservancy arrangements; but refuse, &c., are carried to the outskirts of the town. There is no system of drainage; the streets and roadsides serving as drains. Water-supply.—There are six pucca wells, one at each of the following places, viz., circuit-house, police compound, tehsildar's quarters, tehsildar's cutcherry, old post-office, and new market, and all of them are surrounded by masonry parapets. The level of the water on them during the hot season is generally 30 feet below the ground surface. Mathna, a small river, rising from the adjoining hills in the west, running by the side of the new market towards the east, joining the river Lingera near Jursinga, and falling into the river Brahmani at a distance of seven miles below Angul, is also resorted to, but it dries up in the hot season, before which bunds are erected in three different places by the tehsildar for securing water. There is in addition a big tank, 1,000 by 800 feet, the water of which is excellent, and is used both for drinking and bathing. The tehsildar was told to persuade the people to discontinue bathing in it. Disposal of the dead.—The burning and burying places are far from the villages and sources of water-supply, the ground for the Mahomedans being situated at the foot of a hill to the west. Dead cattle are removed to the outskirts of the town. Health .- Malarial fever prevails in this town generally at the close of any season, and is said to be due to the surrounding jungles. Registration.—Deaths are not registered.

In the end of August the ship Benvenue arrived in sand ballast from Researches relating to special diseases. Colombo in the Port of Chittagong. After a stay of some days in Port, the master of the ship sent for the Civil Surgeon to see one of his men Dengue fever in the l'ort of Chittawho was very ill. The following were the symptoms:—Intense giddiness, with frontal pain; suffused eyes; dazed look; heavily-coated tongue; high continued fever; and constipation. The dizziness in this case almost amounted to fainting. Accompanying these symptoms were racking pains without swelling in all the joints. These were present throughout in every case that occurred afterwards, all more or less characteristic of the epidemic giddiness, suffusion of eyes, frontal pain, and the broken bone or rather dislocated joint sensation, with fever in a greater or less degree. No rash was seen at any time in any one. Those cases which were more severe at the onset recovered soonest, and in them the pains disappeared quicker. The Civil Surgeon himself was attacked, and in his case the fever was mild, but the pain in the joints lingered. The treatment was routine throughout, namely: purgatives followed by diaphoretics and quinine, and regulation of Nearly all cases ran a definite fever course, and afterwards the length of convalescence seemed to depend on the violence of the fever. generally over in four days in the severe forms, and eight or ten in the milder. There was no mortality. The first case in the Benvenue was followed by every one in the ship being attacked, from the master downwards.

ship attacked was the Buckhurst that had come from the Straits; then a large German vessel in sand ballast from Colombo, and then, simultaneously, almost all the other vessels in Port; the total number of ships affected being 15, and only one completely escaping. The disease at no time assumed any serious aspect, and the men were seldom more than a week off duty. It died away in November, and with the exception of two other Europeans, besides the Civil Surgeon, who also were brought into contact with the shipping, no other cases were reported to have occurred in the town, where fever was prevalent, but not accompanied by pains. The cause of the disease could not be traced, but the belief is that sand ballast, and notoriously Colombo sand ballast, is unhealthy.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

The 18th July 1887.

APPENDIX No. I.

VITAL STATISTICS OF THE DISTRICTS IN BENGAL

FOR THE YEAR 1886.

Annual Form No. I.—BIRTHS registered in the principal Municipalities and Towns in the Districts of the Bengal Province during the year 1886.

	1			2	1	3			_	4		5		<u> </u>	6		7	8	<u> </u>
									•	recording to		BER OF TREE		P	IO OF B LR 1,000 PULATI	OF	f males born to fenaties born.	Births over 1,000 of Po-	caths over
Di	STRIC	TS.		Number.	MUNICIPA	LITIE	B AND	Tow	#8.	Population according to Census of 1881.	Male.	Female.	Total.	Male.	Female,	Total.	Number of m	Excess of F Deaths per pulation,	Excess of Deaths over
				1	Burdwan			•••		81,080	804	369	763	11.20	10/82	22.39	106		:
Bankura			5	2	Bankura	•••		***	••-	18,747	226	184	410	12'05	9.81	21.87	122	4'27	
MIRUIT	•	•••	۳۱	3	Bishenpur	•••			•••	21,288	243 281	241 •236	484	11.41	11:32	22.74	100	5'22	
Iduapore	•••	•••		4	Midnapore	•••	1	••		33,560 38,718	426	417	517 843	8°37	7.03	15°40 21°77	119	*****	;
				5	Hughli and C	hineu		•••		26, 196	375	340	715	14'15	12.83	26:08	102 11 0		10
Tughh	•		11	6	Serampore Utterpara	•••	***	•••		5,510	67	54	121	12.15	9.80	21.96	124	2.13	"
				8	Howrah					818,00	1,003	949	1,952	11.04	10.12	21:40	105		,
Iowrah			{	9	Bali	•••				14,815	125	116	239	8.43	7:69	16.13	109		١,
			d	0	Suburbs of Co	Moutt	B			251,439	2,565	2,290	4,855	10:20	970	19:30	112		2
4-Perguniu	he ,	•••	~ {	11	Bussirbat		•••			20,450	67	75	162	4.52	3.00	7:92	116		
	-		۱۱	12	Kishnaghur	***		•••		27,477	305	239	544	11.10	8.65	19.70	127		
inddea	•••	•••	- ∰	13	Santipore	••• .	•••	•••		29,687	209	145	351	7.04	4188	11.95	111	1.65	
			Ч	34	Ranaghat	•••	•••	••	-	8,683	26	22	48	2.99	2.23	5'52	118		١ ٠
essore	•••	•••		15	Jessore	•••		•••		8,495	30	20	50	3.23	2:35	2.83	150		1
aishahye				16	Bonulcuh	•	•••	•••		19,791	281	261	542	14.19	13.18	27:38	107		
urjang	•••	•••	•	17	Darjiling	•••		•••		7,976	81	83	64	3.88	4.13	8:02	93	**,	1
reca	•••	•••	[18	Dacca	•••	•••	•••		80,161 10,263	750 47	654 42	1,304	0°35 4°57	6.91 4.09	10°26 8°67	135 111	., . 	2
'aridpo re	••	•••	•••	19	Faridpore	•••	••	•••		16,091	223	170	393	19.85	10'56	24:42	131		
lymensing	• •	•••		20 21	Jamalpore Chittagong	•••	···	•••		22,130	269	251	520	12.12	11.31	23.40	107	2.26	
'hittagong	• •	•••		29	Comillah					13,506	225	158	893	10.65	11.65	28:35	112		"
ipperuli	•••	•••	{	23	Brahmanber	_	•••	•••		17,543	808	270	578	17:55	15:30	82 94	114	,	
				21	Patna	•••				160,237	1,840	1,622	3,462	11:48	10.13	21.60	113		1
atnu			}	25	Behar			•••		48,971	475	482	957	0.C9	9.81	19.21	98	6.40	
			- (26	Barrh			•••	•••	23,610	201	199	400	8.21	8:43	16.91	101		
iya		•••]	27	Gya	•••		**	•••	76,121	1,128	1,133	2,261	14.81	14.88	29.70	99		2
hahabad			. [23	Arrah	•••		•••	•••	43,465	107	87	194	2.46	5.00	4.40	192		
dozufferpo:	' 0	•••	{	29	Mozusterpore	• •••	•••	•	•••	42,742	4-11	3 86	827	10:31	8.03	19:31	140		
iten miter han		•••		30	Sitamurhi	•••	•••	•••		6,125	80	99	185	14'04	16.16	30.30	142	3.43	-
Durbhanga	•••	•••		31	Durbhanga	•••	•••	•••	•••	66,096	974	888	1,862	14:73	13.43	28'16	109	3.07	'
Sarun			{	37	Chupra	•••			•••	53,249 12,493	376 234	303 179	679 413	7.06 18.73	5.60 14.32	12.75 33.05	124 130	5-12	
				33 34	Revilgungo Bettiah			•••		21,263	438	407	815	50.25	19.14	33 03	107	8:56	
Changarur	•••	•••	".	35	Monghyr			•		57,520	903	802	1,705	15.69	13.01	29.01	112	3.83	
longhyr	•••		}	36	Jamalpore			•		13,563	290	303	593	21.38	22:34	43.72	95	11.95	
EODET,	•••	·	(I	37	Shaikpura					12,517	157	159	316	12'54	12.70	25.54	88		
3lagulpore		•••		38	Bhagulporo		•••			57,453	ยาย	836	1,755	12.09	14.22	30.24	109		
urneab				39	Purneah					15,016	140	94	238	6.35	G·19	15.21	150	l	1
			اء	40	Cuttack			•••		43,230	425	391	816	8.88	9.04	18:87	108	3.53	
Zultack			{	41	Kendrupara		•••	•••	•••	15,697	220	214	434	14.01	13.68	27.64	102		
			Ų	42	Jajpur	•••	•••		•••	11,233	55	59	114	4.85	5 '25	10.14	98	····•	
Pari				48	Puri	***	•••	••	•••	24,781	170	• 130	800	6:85	5'24	12.10	130		4
Lohardu g g				44	Ranchi			***		18,443	153	119	272	8.29	0.42	14.74	128		
Manbhum	•••			45	Parulia	•••	•••			D,304	102	79	181	10.06	8:49	19:45	129	2.50	
			- 1		1						1		1				•	1	1

OFFICE OF THE SANY. COMMR. FOR BENGAL,)

The 8th March 1887.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,
Sanitary Commissioner for Bengal.

App. I.] Annual Form No. II.—Deaths registered in the DISTRICTS of the Bengal Province during the year 1886.

1	2	8	4	5		6	 	7	1===	8 *			9	
	Districts.	according s of 1881.	Area in'square miles.	Population e mile.		ER OF DE		males died 100 deaths	BATIO 1,000 O	OF DEAT	THE PER	PER	ATIO OF 1,000 DU BV10US 1 YBARS.	Five
Number.		Population accord to Census of 1881,	Area in equ	Average Popul per square mile.	Male.	Female.	Total.	Number of 1 to every 1 of females.	Made.	Female.	Total.	Male,	Female.	Total.
	Burdwan Division.													
1 3 4 5 6	Burdwan	1,591,828 1,041,752 791,428 2,515,565 603,050 351,955	2,697 2,621 1,756 *5,082 *880 843	516:06 897:46 452:40 494:99 753:46 1,024:11	14,448 9,604 8,474 27,980 7,255 3,907	12,698 8,011 7,782 25,154 6,739 3,391	16,256 53,114	113 119 108 111 107 115	21.61 18.98 22.20 22.40 22.99 22.40	17:52 14:93 18:84 19:76 19:89 19:09	19:48 16:90 20:46 21:11 21:10 20:73	\$1:18 24:78 31:42 22:59 24:88 20:16	25:96 21:36 27:45 19:23 21:23 17:48	28:46 23:02 29:36 20:39 22:06 19:21
	Total of Hughli, includ- ing Serampore	1,015,005	1,223	829-93	11,162	10,130	21,292	110	23.77	19:29	20.97	23:49	19.96	21.00
• 7	Howrah	635,381	476	1,334.83	6,569	5,301	11,870	123	20.75	16.02	18.68	20.88	16.40	18.67
# {	Presidency Division. 24-Pergunnaha, exclusive of Suburbs of Calcutta. Suburbs of Calcutta.	1,618,420 251,439	2,007 23	771·78 10,932·13	16,631 5,783	13,721 4,404	80,352 10,187	121 131	20.07 89.28	17-86 42-25	18°75 40°51	22·50 45·90	18.02	20:76 45:49
	Total of 24-Pergunnalis	1,869,859	2,120	885.00	22,414	18,125	40,539		22:17	50.58	21.68	26.03	21.89	24'08
9 10 11 12	Nuddes Jessore Murshidabad Khulna	1,655,721 1,639,375 1,226,790 1,079,948	2,755 2,925 2,144 2,077	600:98 668:03 572:20 519:96	26,0° 4 24,498 14,780 12,245	21,850 20,906 12,653 11,637	47,874 45,402 27,383 23,882	119 117 116 105	32·29 26·53 26·11 21·54	25.70 21.33 19.76 22.74	28:91 23:41 22:32 22:11	46:93 28:23 31:57 23:43	37:18 23:98 23:75 23:18	41:93 25:58 27:49 23:31
	Rajshahyo Division.								•					
13 14 15 16 17 18 19	Dinajpur	1,514,346 1,338,638 2,097,904 734,358 1,511,726 156,137 581,562	4,118 2,361 3,496 1,405 1,847 1,234 2,884	367:74 566:98 601:83 490:23 710:19 126:53 201:65	22,125 19,478 36,923 10,812 22,908 2,358 11,211	17,071 16,685 30,692 8,803 18,721 1,680 9,330	80,196 36,163 67,615 19,115 41,029 4,047 20,541	129 116 120 117 122 139 120	28:28 29:50 34:58 27:67 35:83 26:37 86:69	23:31 24:61 29:79 24:33 28:21 25:30 33:80	25:88 27:01 32:22 26:02 31:73 25:91 86:32	21.06 35.07 20.30 25.48 27.07 11.96 20.26	16:60 28:20 17:03 22:18 22:23 10:00 17:78	19:91 81:68 18:73 23:85 24:63 11:13 19:09
ĺ	Darca Division.		ĺ					1						
20 21 22 23	Dacca Faridpore Backersunge Mymensing	2,116,350 1,631,734 1,900,889 3,051,966	2,797 2,167 3,649 6,287	756:65 719:78 520:98 485:41	25,845 16,107 25,535 30,426	22,670 13,287 25,190 24,784	48,515 29,394 50,775 55,210	114 121 101 122	24:99 19:98 26:28 19:58	20:94 16:09 27:16 16:53	22:92 19:01 26:71 18:08	22:53 14:47 23:18 11:05	18:40 18:07 23:56 9:64	20'42 14'75 21'51 10'81
	Chittagong Division.			l										
24 25 26	Chittagong Noukhali Tipperah	1,132,341 820,772 1,519,338	2,587 1,641 2,491	441·11 500·17 609·93	8,164 8,649 14,240	7,634 8,745 12,918	15,798 17,397 27,158	106 98 110	15:35 20:82 18:47	12:70 21:67 17:25	13:95 21:19 17:87	19:62 20:72 15:86	15·13 10·11 13·33	17:24 19:98 14:61
	Patna Division.		2,079	845-05	22,234	19,710	41,944	112	25-89	21.04	23.87	28.23	24:38	26:40
29 30 31 32	Patna	1,756,856 2,124,682 1,964,909 2,582,060 2,633,447 2,960,382 1,721,608	4,712 4,361 3,003 3,335 2,622 3,531	450°15 450°15 859°83 779°64 869°71 487°57	27,839 86,905 19,875 19,511 25,817 19,502	26,441 84,181 14,425 15,405 19,887 16,119	54,800 71,0% 84,200 84,916 45,704 85,020	105 107 138 126 129 120	26.70 38.83 15.70 15.05 23.82 22.39	24'44 83'08 10'88 11'81 16'61 18'94	25.68 86.17 13.24 18.25 20.04 20.68	28:95 20:82 18:34 16:03 21:84 18:40	20'91 16'79 13'58 12'52 15 14 14'52	22'40 18'74 15'92 14'25 18'32 16'48
}	Bhagulpore Division.		İ		ļ				1	į				
84 35 36 37 38	Monghyr	1,969,774 1,906,158 1,848,687 _710,148 1,568,093	3,921 4,268 4,958 1,991 5,456	502:37 460:67 573:02 375:70 287:41	20,947 27,718 21,544 6,813 11,850	27,070 21,621 16,824 4,708 9,558	56,917 53,342 38,368 11,021 21,408	110 112 128 134 123	30·79 28·30 22·99 18·19 15·08	27:05 24:94 18:45 12:05 12:21	28°89 26°62 20°75 15°51 13°65	19'41 32'77 21'19 23'95 15'25	15:89 19:10 17:25 17:68 12:03	17:62 20:98 19:25 20:74 13:64
	Orissa Division.				1				1	1				
39 \$0 41	Cuttack Puri Bala	1,795,065 889,487 945,280	3,633 2,473 2,066	404*09 350*27 467*54	18,145 10,566 12,540	17,031 10,121 12,115	35,176 20,687 24,655	100 104 108	20:67 23:65 27:17	18:56 22:90 25:04	19:59 23:28 26:04	21°80 22°99 20°07	19:30 21:06 22:60	20°52 22°03 24°29
:	Chota A 4/2 pore Division.	1			į				ł			}		
42 43 44 45	Hazaribagh	1,104,742 1,609,244 561,964 1,055,228	7,021 12,045 4,336 4,147	157:35 137:60 129:60 265:18	10,980 14,687 4,487 8,593	10,055 12,495 3,651 7,157	21,035 27,132 8,138 15,750	109 117 122 120	20°15 18°37 15°96 16°35	17:96 15:38 12:99 13:43	19:04 16:86 14:44 14:88	19:99 18:31 16:47 15:71	16:97 15:31 13:40 12:70	18:46 16:79 14:94 14:20
	TOTAL FOR THE PRO- VINCE	66,163,981	144,863	456.73	781,385	673,930	1, \$55,305	115	23.79	20.51	21.99	22.20	18:44	20.35
	A village was transferred for	ron. Midnen	re to Hughli	hnt ag it			w is not be				bo alter			ata tha

^{*} A village was transferred from Midnapore to Hughli, but as its area in square miles is not known, these figures cannot be altered so as to indicate the reduction and increase respectively caused by the transfer.

OFFICE OF THE SANY. COMMR. FOR BENGAL, The 8th March 1887

Annual Form No. III.—Deaths registered in the Districts of the Bengal Province during EAOH MONTH of the year 1886.

1	2	, , , , , , , , , , , , , , , , , , ,		•		de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la	44	3	. 		· A leading	1000		4
Number.	Districts.	January.	Pebruary.	March.	April.	Мау.	June.	July.	August.	September.	October,	November.	December,	TOTAL DEATHS REGISTERED DUE. 136 THE YEAR.
Ī	Burdwan Division.		1					Ì					1	
1 3 4 5 6	Burdwan	2,145 1,292 1,039 5,186 1,275 734	1,925 1,819 918 4,717 1,161 405	2,426 1,587 1,072 4,326 1,250 545	2,208 1,605 1,194 2,783 1,002 468	1,922 1,508 1,104 3,447 856 400	1,741 1,205 1,045 3,023 620 340	1,723 1,176 1,105 3,419 750 854	2,025 1,511 1,386 3,950 900 462	1,963 1,200 1,359 3,659 999 538	2,104 1,559 1,419 4,676 1,267 694	3,002 1,782 1,804 5,896 1,731 1,030	3,762 1,981 2,411 7,192 2,184 1,238	27,126 17,615 16,256 53,114 13,994 7,298
	Total of Hughli, including Scrampore	2,009	1,656	1,795	1,470	1,256	960	1,104	1,302	1,537	1,961	2,761	3,421	21,202
7	Rowrah	1,121	861	987	809	612	559	670	896	829	1,039	1,027	1,860	11,870
	Presidency Division.				-		ł	•	1				1	
s{	24-Pergunnahs, exclusive of Suburbs of Calcutta Suburbs of Calcutta	3,256 938	2,382 779	2,128 625	2,031 681	1,492 579	1,856 514	1,593 666	1,982 762	1,877 785	2,390 1,126	8,590 1,356	6,275 1,376	30,352 10,187
	Total of 24-Pergunnahs	4,194	3,161	2,753	2,712	2,071	1,870	2,250	2,744	2,662	3,516	4,946	7,651	40 539
9 10 11 13	Nuclden	3,372 6,352 1,726 2,799	3,008 4,165 1,468 1,072	4,082 4,070 1,518 1,695	4,990 5,371 2,240 1,556	4,183 8,046 2,049 1,303	2,548 1,880 1,639 1,015	2,193 2,042 1,628 1,244	5,188 2,025 1,870 1,313	3,022 2,450 2,175 1,775	3,818 3,156 2,069 2,011	6,022 4,541 3,662 8,300	7,398 6,298 4,044 4,199	47,874 45,402 27,383 23,882
	Rajshahye Division.				1	- 1			1	1	1	1	1	
18 14 15 16 17 18	Dinajpur Rajshahye	3,350 3,624 5,×61 1,571 3,958 167 1,520	2,832 2,378 4,410 1,153 2,900 213 1,289	2,952 2,259 5,077 1,308 8,486 210 1,567	2,922 2,806 4,902 1,425 6,213 297 1,923	2,605 8,113 4,662 1,191 4,308 295 1,560	2,313 2,067 4,092 1,031 2,324 432 1,353	2,321 1,800 4,003 1,361 2,247 533 1,483	2,816 2,389 4,534 1,547 2,125 462 1,329	2,991 2,438 5,084 1,656 2,477 411 1,335	3,920 3,520 5,728 1,778 8,113 348 1,976	5,063 6,409 8,483 2,260 3,936 338 2,786	5,111 5,360 10,775 2,830 4,542 296 2,418	39,196 36,163 67,415 19,115 41,629 4,047 20,541
	Dacca Division.					l				1				
20 21 22 23	Dacca	5,036 3,361 5,129 6,268	3,031 1,983 3,352 4,097	3,302 2,652 3,780 4,288	4,511 5,494 4,120 5,218	8,640 8,286 8,598 5,383	2,501 1,342 2,751 3,836	2,399 1,182 2,774 3,600	2,417 1,218 2,664 3,316	3,033 1,377 2,677 3,630	3,832 1,691 3,656 4,4 06	5,325 2,145 7,094 5,203	9,398 3,663 9,235 5,965	48,515 29,804 50,775 55,210
	Chittagong Division.			Ì										
24 25	Chittagong	1,541 1,773 3,184	1,373 1,293 1,974	1,370 1,245 2,718	1,063 1,353 2,686	1,203 1,439 1,888	1,208 1,341 1,463	1,378 1,339 1,453	1,275 1,357 1,602	1,252 1,201 1,747	1,344 1,358 2,259	1,261 1,656 2,685	1,530 2,042 3,499	15,799 17,897 27,158
	Patna Division.													
27 28 29 30 31 32 33	Patna Gya Shahabad Morufferpore Durbhangs Sarun Chumparun	2,430 3,022 3,452 2,412 2,786 2,807 2,023	1,847 2,086 2,488 1,970 2,056 2,825 1,834	1,849 2,308 2,322 2,205 1,728 2,683 2,014	2,103 2,759 2,722 2,176 2,221 2,488 2,369	2,270 2,606 2,496 1,894 2,130 2,587 2,603	\$,265 3,188 3,108 2,565 2,953 3,295 2,630	3,473 4,052 3,991 2,589 3,004 3,793 2,686	6,259 6,851 6,868 3,041 2,963 5,194 3,467	4,581 7,630 9,829 3,022 3,198 5,188 3,494	5,110 7,365 12,723 3,392 3,685 4,783 3,379	5,059 7,977 12,974 4,771 4,233 5,352 4,860	8,712 4,476 8,118 4,363 8,964 4,214 4,261	41,944 54,360 71,086 84,200 84,916 45,704 85,620
	Bhagulpore Division.													
34 35 36 87 38	Monghyr	3,432 9,433 3,217 772 1,607	3,174 2,562 2,395 748 1,159	3,629 2,841 2,984 741 1,216	8,243 8,441 8,615 905 1,713	3,191 3,292 2,380 706 1,655	3,724 3,583 2,606 570 1,481	3,505 3,609 2,378 601 1,885	5,638 4,411 2,359 608 2,315	5.578 5.578 2,240 732 2,863	7,131 6,545 2,887 1,263 2,112	9,817 7,146 5,129 1,892 1,916	5,341 5,901 5,178 1,923 2,006	56,917 52,812 98,868 11,021 21,408
	Orissa Division.	1										İ		
39 40 41	Cuttack Puri		3,955 1,509 2,235	3,822 1,402 2,459	2,947 1,468 1,779	2,454 1,241 1,643	2,087 1,101 1,170	2,187 1,792 1,362	2,154 1,592 1,583	1,907 1,226 1,517	2,338 1,349 1,937	2,848 2,513 2,794	3,587 8,550 3,716	35,176 20,687 24,655
	Chota Nagpore Division.													
42 43 14 45	Hazaribagh	1,730 724	1,167 1,603 612 904	1,315 1,762 733 1,248	1,745 2,111 745 1,515	1,701 2,105 640 1,566	1,587 2,216 584 1,282	1,673 • 2,521 • 632 1,381	2,142 3,062 689 1,803	2,148 2,876 679 1,521	2,104 2,384 598 1,195	2,095 2,048 726 1,191	1,989 2,114 776 1,240	21,035 27,132 8,138 15,750
	TOTAL FOR THE PROVINCE		94,331	102,151	115,476	100,827	88,329	93,422	114,440	119,871	139,188	177,012	187,707	1,455,805
	RATIO OF DRATES PER 1,00 OF POPULATION IN EACH	1.00	1.42	1.24	1.74	1.23	1:33	1.41	1.72	1.80	2.10	2.67	● 2:83	21.00

Office of the Sany. Commr. for Bengal,

The 8th March 1887.

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Annual Form No. IV.—Deaths registered according to AGE in the Districts of the Bengal Province during the year 1886.

1	2	,			4	-	5	1	в	1	7 ,		8	-	9		10		11		12
	В 18ткі ст я.	Un 1 Y		UE	AND NDER (EARS.	U	AND NDER TEARS.	וט	AND VDEL	U	AND DER EARS.	U	AND NDER (EARS.	US	AND IDER RARS.	UN	AND IDER BARS.		I UNDER EARS.	A	EARS ND ARDS.
Number.		Male.	Female,	Male.	Female.	Male.	Female.	Male.	Pemale.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Burdwan Division.		"																		
1 2 3 4 5 6	Rurdwan	1,99 4,53 99	5 1,30 1 1,51 8 3,86 7 78	1,01 2 86 2 8,04 7 66	19 1,00 36 78 47 3,14 12 67	9 61 8 2,00 8 44	8 61 8 50 8 1,82 8 40	1 48 3 38 4 1,30 4 30	8 28 8 28 0 80 5 24	2 55 6 34 6 1,35 2 36	5 46 6 46 1 1,23 4 42	1,18 5 89 8 8,00 5 1.08	2 1,02 2 1,00 0 8,10 0 1,07	3 1,14 9 1,02 8 3,39 8 95	2 78 0 84 8 2,72 8 73	7 1,02 5 86 5 3.04 8 98	1 689 4 745 4 2,173 805	82 75 2,48 74	2 643 3 643 2 2, 22 5 663	1,10 74 8,73 78	7 1,059 2 941 9 4,048 4 925 9 503
	Total of Hughli, includ- ing Scrampore,	1,62	9 1,21	5 1,13	1,10	2 75	5 65	8 45	5 80	52	583	1,48	3 1,57	9 1,40	1,11	1,46	5 1,150	1,09	9 946	1,22	1 1 27
7	Howrah	1,00	78	0 83	9 77	2 43	40	1 27	15	28	264	72	4 64	4 68	490	70	5 894	53	6 406	1,02	5 993
	Presidency Division.			1	1																
n {	24-Pergunnahs, exclusive of Suburbs of Calcutta. Suburbs of Calcutta	1,968	1	1	1	1	1	1	1	1	989 289	1	1	1	1	1			1	2,32°	1
	Total of 24-Pergunnahs	2,917	2,181	2,676	2,40	1,94	1,477	1,110	77:		1,258	3,02	2,62	.	1,819	2,098	1.428	1,72	1,417	2,80	2,659
9 10 11 12	Nuddea	2,090 1,230 1,761 1,801	1,119	2,910 1,951	2,702	8,00 1,68	2,23: 1,811	1,9%	671	1,441 1,388 908 540	1,239 1,429 711 881	3,077 1,77	7 3,089 2 1,419	3,20 1,52	1,157	2,790	3 2,122 1,091	2,099 1,070	2 1,772 0 1,050		3 2,697 3 1,899
	Rajshahye Division.													,							
18 14 15 16 17 18 19	Dinajpur	2,848 1,475 4,224 1,366 1,513 263 2,153	1,311 8,162 1,131 1,283 193	1,367 3,920 816	2,922 8,858 1,238 3,638 245	3,007 3,062 1,006 3,835	2,106 2,201 786 2,668 153	1,390 2,198 602 2,149 160	860 1,470 861 1,234 104	1,027 2,015 532 1,229	1,147 2,167 598	2,351 4,893 1,240 2,239 418	2,451 5,835 1,888 2,192 256	2,754 5,454 1,288 2,259 850	2,031 4,461 994 1,678 185	2,046 4,161 1,092 1,933 203	1,501 3,191 805 1,360	1,796 1 157 2,831 757 1,477 143 1,110	1,023 2,109 649 1,200	1,413 3,835 1 028	1,273 5,243 853 2,294 166
	Dacca Division.																				}
20 21 22 23	Dacea Faridpore Buckergungo Mymensing	3,866 1,150 6,292 3,290	2,927 907 5,310 2,406	2,225 3,942	3,424	2,596	1,041	1,040	681 711	768 633	1,327 892 1,153 1,679	1,555	1,912 2,980	1,935	1,603 2,197	1,772	1,508	1,747 1,539 1,922 2,343	1,132	4,200	2,011 3,914
j	Chittagong Division.																				7
24 25 26	Cluttagong Noukhali Tipporah	829 2,247 2,471		1,270	1,823	473	507	326 295 585	190	337 223 627	437 335 929	768 465 1,486	931	1,032 053 1,576	850	999 639 1,267	571	879 668 1,056	565	1,476 1,674 2,638	1,597
}	Patna Division.				1		1,	! !													
27 28 20 30 31 32 33	Patua	4,456 4,605 6,371 1,223 1,333 4,823 8,083	5,541 918 1,095	4,795 6,637 2,355 8,072 3,914	4,279 0,457 1,982 2,741 2,967	2,012 2,640 1,564 1,741 1,564	2,010 1,027 1,284	1,840 1,811	1,088 845	625 1,0.9 958 868 823 1,074 652	577 1,059 826 497 601 702 528	2,363 3,349 2,551 2,335 2,112	8,163 1,612	2,596 3,529 2,591 2,454 2,480	2,542 2,880 1,662 1,787 1,877	2,671 3,360 2,559 2,800 2,800	1,645 2,388 2,601 1,629 1,552 1,867 1,319	2,185 2,829 2,880 2,371 2,013 2,225 1,664	2,652 2,731 1,956	3,019 8,508 5,861 2,731 2,453 5,737 2,409	4,069 7,134 2,521 2,390 3,677
	Bhagul pore Division.									l					ļ	Ì					
37	Monghyr	6,590 4 646 1,356 592 1,506	5,881 4,245 1,325 496 1,312	6,512 4,836 2,281 1,004 2,218	6,244 4,569 2,047 744 1,025	2,211 1,701 661	1,577	1,207 1,261 1,437 438 790	838 810 915 227 508	676 1,137 1,396 885 651	623 989 1,132 807 552	2,106 3,169 3,402 734 1,229	560	3,181	1,668 2,442 2,558 400 742	2,466 2,669 2,619 599 1,035	1,812 2,069 1,767 369 749	2,439 2,257 1,854 417 894	2,367 2,304 1,582 839 700	2,351 1,553 709	1.588
	Orissa Division.		ļ	I	1		ļ									ļ		Į	1		L
39 40 41	Cuttack Purr Balasore	3,003 2,537 2,081	2,695 2,533 2,396	2,497 1,090 1,700	2,468 1,186 1,713	1,488 652 887	7,149 578 877	776 849 830	581 27-2 446	796 432 566	1,019 522 626	1,792 985 1,136	1,834 1,067 1,239	1,148	1,647 928 1,178	1,032	1,225 678 879	1,679 948 1,063	1,509 859 868	2,398 1,393 1, 1 31	2,908 1,721 1,898
42 43 44	Chota Nagpore Pivision. Hazaribagh Lohardugga Sinchlum	2,700 722	1,815 2,140 038	1,878 2,614 451	1,847 2,384 074	808 1,196 552	673 926 318 686	483 792 230 543	368 558 136 331	840 620 211 593	298 605 176 428	920 1,420 438 855	821 1,232 319 755	1,159 1,437 463 914		1,081 1,356 538 825	746 1,070 855 510	1,011 1,201 485 702	1,010 1,107 307	1,301 307	1,644 1,257 457
ю.	Total for the Pro-	1,158	172 13,379	1,218	1,116	786 7,987				l-								61,695	55,416	95,376	97,517
	VINCE. RATIO PER 1,000 LIVING.			28.30	24 42		10-86		-	14'16	/	.		18.30	_		17.89	34.30	27:32		45.61
		-=- 00			4				- "			~~~	1				al	35.30			

Office of the Sany. Commr. for Bengal,

The 8th March 1887.

Annual Form No. V.—Deaths registered according to CLASS in the Districts of the Bengal Province during the year 1886.

1	2				3	•	•	Ī.			4						<u></u> 5	 ,	
		Pot	PULATION	ACCORDIN	а то (CENBUS OF	1881.		Иплян	sr of D	RATHE	BEGISTI	RED.	RA	T10 01	POPU	THS P	 KR 1,0	40 00
Number.	Districts.	Christians.	Hindus,	Mahomedans.	Buddhista.	Other classes,	Total,	Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Total.	Christians.	Hındus,	Mahomedans.	Buddhists.	Other classes.	Total.
1 2 3	Burdwan Division. Burdwan	910 56 48 740 290 365	910,845 617,310 2,233,300 533,033	46,274 162,621 164,001 120,702	 36	6,421 84,577 14,449 117,488 23	1,011,752 704,428	6 3 12	13,000 47,756 11,040	5 5,031 3,031 3,091 2,944		71 844 222 2,925	27,126 17,615 16,256 53,114 13,994	53°57 10°21 34 48	19:75 17:64 21:65 2::80 20:71	15:01 18:65 18:84 22:00		11:05 9:97 18:09 18:98	19:18 16:90 20:46 21:11 21:10
7	Total of Hughli, in- cluding Scrampore Howrah	655	825,207	184,800	290	53	1,015,005		17,179 9,290	4,102		8	7,298 21,292 11,870	16.79	20'81	21.72	==	9.83	20:97
s{	Presidency Division. 24-Pergunnahs, exclusive of Suburbs of Calcutta. Suburbs of Calcutta Total of 24-Pergunnahs	9,928 4,048 13,976	149,930	96,583	230 127 357	429 751 1,180	1,618,420 251,439 1,869,859	131 221 352	10,029 0,472 25,501	11,192 3,491 14,683	 	-	30,352 10,187 40,530	18:19 54:59 25:18	18'97 48'16 2.11	18'50 80'14 20'03	28.62		18:75 40:51 21:08
9 10 11 12	Nuddes	6,422 492 470 747	768,322		1	13 56 1,566	1,655,721 1,939,875 1,226,790 1,079,948	175 5 9 19	21,058 17,866 14,833 10,981	26,641 27,531 12,538 12,879		s	47,874 45,402 27,388 24,882	27°26 10°16 19°14 25°48	28'92 23'25 23'36 20'97	28:01 28:52 20:01 28:01		1:91	28-91 23-41 22-82 22-11
18 14 15 16 17 18	Rajshahye Dreision. Dinappur	457 121 86 27 114 1,800 159	816,532 140,860 361,479 126,717	795,524 1,049,700 1,279,605 593,411 949,908 8,204 208,513	60 2 1 18,775	1,435 13 1,681 58 226 641 4,513	1,514,946 1,398,638 2,097,964 734,358 1,511,728 156,137 581,562	3 2 26	17,755 7,035 26,404 8,719 11,295 3,403 12,847	21,401 29,128 42,178 15,398 30,334 197 8,001	::: ::: ::: :::	27 20 193	89.196 56,163 67,615 19,116 41,629 4,047 20,541	6.56 23.25 14.44	24.77 24.36 31.11 26.40 31.24 27.66 33.56	26:89 27:74 32:96 25:94 31:93 24:61 38:37	10.56	25·78 16·08 31·20 42·76	25:88 27:01 32:22 26:02 31:73 25:91 35:32
20 21 22 21	Dacca Division. Dacca Paridpore Mack-reunge Mymensing	8,799 2,741 3,717 151	658,992 624,597	974,983 1,267,694	49 13 4,797	135 5 81 26,955	2,116,350 1,631,734 1,900,889 3,051,966	179 41 56	20,353 12,334 15,463 19,565	27,983 17,019 35,229 34,997	 27		48,515 29,394 50,775 55,210	20:34 14:95 15:06 26:48	23'75 18'85 21'75 19'81	92 87 17 53 27 78 17 16	5.62	 21:81	22:92 18:01 26:71 18:03
21 25 26	Chittagon y Bivision. Chittagong Nonkhah Tipperah	1,055 848 199	211,476	801,986 608,592 1,997,740	54,110 1+4 374	13 2		16 12	3,890 4,231 10,213	11,169 13,154 16,9 4 5	728 		15,798 17,397 27,158	15·16 20·40	14·13 20·00 19 98		13:36		18'95 21'19 17'87
27 24 29 30 31 32 31	Patna Division, Patna	2,589 96: 276 372 325 282 1,036	1,541,061 1,891,444 1,817,841 2,205,380 2,823,979 2,010,988 1,476,085	218,141 233,098 146,732 316,308 308,985 269,142 242,687		66 4 20 158	1,756,856 2,124,682 1,964,960 2,582,060 2,633,447 2,280,382 1,721,608	42 4 5 3 2 58	37,281 49,400 66,982 30,550 31,343 41,263 31,245	4,621 5,900 4,100 3,645 3,570 4,439 4,317	 		41,944 54,900 71,086 84,900 84,916 45,704 35,620		24°12 25°59 36°84 13°48 13°48 20°51 21°15	21.68 25.31 27.94 11.62 11.55 16.49 17.78		 	23°87 25°53 36°17 13°24 13°25 20°04 20°08
84 85 36 87	Bhagulpore Division. Monghyr Bhagulpore Parneah Maidah Sonfhal Pergunnahs	1,091 578 327 28 3,057	1,774,013 1,764,804 1,076,539 379,153 847,590	187,517 185,553 771,130 329,525 108,899	132	15,743 691 1,744	1,909,774 1,968,159 1,848,687 710,448 1,568,093	22 8 2 	52,408 48,614 22,963 6,562 13,252	4,487 3,658 15,403 4,428 1,840	:::	64 38 6,802		6.11 8.11	29.54 27.55 21.33 17.30 15.39	23:92 19:70 19:96 13:43 16:89		4°06 18°92 10°35	28*89 26 62 20:75 15:51 16:85
39 40 41	Orisea Division. Cuttack Puri Balasore Chota Nagpore	2,342 819 815	1,744,227 873,664 915,792	47,529 14,003 23,804	3 4	964 1 4,865	1,795,065 888,487 945,280	83 8	34,594 20,451 24,240	540 203 369		39	35,176 20,687 24,655	8.60	19:83 23:44 26:46	11.55 14.49 15.60	 	 7'81	19*59 23*28 26* 08
42 43 44 45	Devision. Hazaribagh Lehardagga Singbhum Manbhum	552 36,251 2,988 552	924,811 868,842 565,046 946,247	106,097 77,448 3,242 46,453	1 ₂₃	73,282 626,717 648 65,958	1,104,742 1,609,244 • 561,964 1,058,228	2 243 22 6	15,659 13,827 8,027 14,193	1,902 1,692 70 652	 	3,472 11,370 19 890	21,085 27,182 8,188 15,750	6.09 6.09	16*98 15*91 14*96 14*96	17 93 21 85 21 82 14 34	::- ::- :::	47:87 18:14 29:32 13:63	19'04 16 86 14'18 14'88
	TOTAL FOR THE PRO-	101,884	42,053,029	21.361,957	79,721	1,067,293	66,163,884	1,415	944,699	481,641	1,084	26,486	1,455,305	13.88	81.89	22.24	13:34	15.88	21:00

OFFICE OF THE SANY. COMMB. FOR BENGAL,

The 8th March 1887.

App. I.]

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the

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1				2						. 8	4	5	6	7
Number.			istric	OTS AP	. To	WN9.	.•			Population according to Census of 1881.	Cholera,	Small-poz.	Pever,	Bowel-complaints.
					icts.				-					
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli Serampore		Burd:	 	Division	on.		•••		1,335,905 989,106 786,380 2,446,201 613,826 805,231	1,162 461 588 4,535 489 453	4 81 7 17 4	20,110 12,050 11,537 36,077 9,404 3,593	42 38 10 3,52 1,09
						uding	Seran			919,056	942	Б	12,997	1,80
7	Howruh	•••		•••	e	•••	•••	•••		529,763	817	3	4,875	1,81
	ļ		Presi	dency	Divi	sion.				1		•		
8	24-Pergunnaha Nudden	•••		•••	•••	•••	•••	•••	:::	1,424,329 1,560,321	4,156 6,742	2 10	18,775 34,336	92 38
10 11 12	Jessore Murshidabad Khulna	···	 Rajsh	 	···	 ion.	•••	•••	:::	1,930,880 1,143,106 1,065,082	7,866 1,420 1,671	18 2	84,850 20,425 18,747	12 11 25
3	Dinajpur	,.						•••	}	1,501,780	24	59	86,048	29
5	Rajshahye Rungpore		•••	•••	•••	•••	•••	•••	:::	1.318,847 2,084,644	997 6,115	16 14	52,763 56,538	7 85
7	Rogra Pubna			•••	•••	•••	***	***	:::	728,179 1,275,424	966 3,089	1	16,230 35,217	27 27
8	Darjiling Julpaiguri	•••	•••	•••	•••		•••	• • •	:::	148,161 578,615	, 1 32 7	24	2,493 17,959	67 11
			Dac	ca Di	vision	. .				1	ŀ			
0.	Dacca	•••					•••	•••		2,023,629	6,105 7,217	41 17	29,527 19,021	3,51 60
3	Furidpore Backergunge Mymensing	•••		• •	:::	•••	•••	•••	==	1,621,471 1,887,703 8,004,853	2,987 6,966	145 97	31.767 37,265	68 2,10
		C	hittag	yong l	Divisi	ion.			1	Ì			ì	
5	Chittagong Noskhali	•••	•••		•••	•••	•••	•••	:::	1,110,211 815,648	314	1 8	12,360 13,760	393 27
:6	Tipperah	•••	•••	•••	***	•••	•••	•••	•••	1,488,289	2,979	11	18,026	272 710
			Pat	na Di	vision	١.						1		_
27 28	Patna Gyn	•••	•••	•••	•••		•••	•••	:::	1.471,813 2,088,691	2,040 4,000	53 220	28,827 38,808	* 2,386 818
(i)	Shahabad Mozufferporo	•••	•••	•••	•••		•••	•••		1,885,941 2,400,715	5,942 1,752	196 159	56,681 22,539	61: 1.37
13	Durbhanga Sarun	·••			•••	•••	•••	•••	:::	2,567,851 2,201,333	1,813 1,813	168 110	26,043 18,481	2,103 2,956
3:3	Chumparun		 haant		in Dinini	ion		••	"	1,700,345	951	1,267	25,236	290
14	Monghyr		hagul	<i>μ</i> ∪τ8 .	v:vi81					1,886,174	646	203	46,073	495
5	Bhagalpore Purneah				•••	•••		•••	:::	1,908,705 1,833,671	807 2,475	28 82	40,711 81,071	1,260 1,61
17 18	Maldah Sonthal Pergui		•••	•••	•••	•••	•••		:::	698,018 1,560,088	133	79	10,115 17,736	27 833
"	Something Torque	1114412		··· sa Du	 vision	•••	•••	•••		2,000,000		"		0.00
9	Cuttack					•	•••	•••		1.724.896	6,944	292	15,240	3,290
i	Puri Balasore	•••	•••	:::	•••	•••	•••		:::	1,724,896 863,703 925,015	8,100 4,070	91 876	3,061 10,028	2,12 4,287
	•		ta Na	gpore			•			-			1	-
3	Hazaribagh Lohurdugga Singbhum	•••					•••	•••		1,089,436 1,590,801 555,958	1,084 13	11 79 1	17,978 19,610 5,675	59: 1,691 59:
5	Manbhum	•••		•••	•••	•••	•••	•••		1,048,924	145	3	11,906	707
			_			FOR]	Distri	CTS		68,734,306	108,433	8,845	1,027,681	46,587
				rwo.							.			
1	Rurdwan	.,,	Burd:	wan 1	Distri 	ce. 		•••		84,080	22	3	571	110
8	Kama Kanigunge	•••	•••	•••	•••	•••	***	•••		10,501 10,987	82 13	*****	196 135	8
	- "				istri				1		1			
4	Rankura	•••		•••	•••	•••	***			18,747	16	441100	185	8
5 6	Bishenpur Sonamukhi	•••	***	•••	•••	•••	•••	•••	:::	21,283 12,616	11	*****	205 118	1
			Birli	hum I	dstri					}			[
7	Soori	•••	 Midno	 Inore	 Dinte	···	***	***		7,848	4	******	88	
8	Midnapore			_						3 3,560	51		280	1:
9 10	Ghatal Chandrakona	•••	•••	•••	•••	***	•••	***		12,638 12,257	25		81	12 5 4
ii	Ramjibanpore	·	***	•••		::	•••	•••	:::	10,009	18	*****	119 96	1
			IIu	ghli L	rstric	t.			1					
				•••	•••	•••	•••	•••		39,718 10,507	. 199		527 99	26
12 13	Hughli Jehanabad	•••									n I			
		•••	•••	•	. .	•••	•••	•••		26,496 14,718	202 35	2	336 108	\$1 5

Districts and Principal Towns of the Bengal Province during the year 1886.

		8			9	10				≖ =. ±.	11				13
		INJUE	LY.			AIL.	R.	ATIO	OF DEAT	HS P	R 1,000	OF POI	PULATI	ON.	
SUI	CIDE.	ats.	killed by			PROK				•			Frov Cau	i All sks.	
Male.	Female.	Wounds or Accidents.	Snake-bite or kill Wild Beasts.	Total.	All other Causes.	TOTAL DRATHS CAUSES.	Cholera.	Small-por.	Pever.	Bowel-complaints.	Injury.	All other Causes.	For the year.	Mean of previous five years.	Number.
28 12 3 16 13 11	26 17 9 16 26 7	120 63 106 816 109 32	171 174 103 631 149 57	345 266 221 979 297 107	3,615 2,926 3,667 6,712 1,390 930	25,865 16,715 16,121 51,848 12,675 5,795	*86 *46 *74 1*85 *79 1*48	*002 *03 *008 *006 *006 *008	15.05 12.78 14.60 14.74 15.32 11.77	*32 *38 *12 1644 1*77 2*32	*25 *26 *27 *40 *48 *35	2·70 2·95 4·65 2·7·4 2·26 3 04	19°21 16°89 20°49 21°19 20°64 18°98	28'05 22'47 28'28 20'72 21'75 17'40	1 2 3 4 5
24	24	141	208	374	2,320	9,503	1.02	*005	9.50	3.43	*43	3.02	17:93	20 33	7
39 67 63 32	58 91 107 43	840 235 291 131	351 602 425 435 185	797 995 886 641	2,006 3,797 1,480 1,604	26,661 46,261 45,213 24,221	2°91 4°32 4°07 1°24	.001 .006 .005	13·18 22·00 18·04 17·86	*64 *24 *06 *09	*55 *63 *45 *56	1·40 2·43 ·76 1·40	18·71 29·64 23·41 21·18	20°40 42°73 25°55 27°18	5 9 10 11
25 12 21 6 8 24 8	9 66 7 22 57 9 5	281 266 301 162 181 22 60	293 408 274 202 318 4	595 761 588 594 580 43 119	1,271 819 3,504 1,378 998 421 851	28,562 38,891 35,430 67,115 18,996 40,161 3,888 20,379	1.56 .41 .75 2.93 1.82 2.42 1.53 2.81	*091 *03 *01 *006 *0007 *16 *006	24*00 24*81 27*12 22*28 27*61 16*82 31*30	*24 *19 *05 *17 *04 *21 4:58 *20	*41 *88 *5; *54 *45 *29 *20	2:29 :84 :62 1:68 1:88 :78 2:84	22-12 25-80 26-86 52-19 26-08 31-48 26-24 35-52	23'45 18'90 81'84 18'65 23'77 24'51 10'79 18'91	12 14 14 15 16 17 18
49 24 29 44	04 75 50 59	281 146 843 266	283 276 219 311	707 561 1,141 680	6,432 1,638 13,763 6,954	46,831 29,057 50,489 54,066	3.01 4.45 1.58 2.31	-02 -01 -07 -03	14·59 11·73 10·82 12·41	1·78 ·37 ·36 ·70	*34 *34 *60 *22	3·17 1·01 7·29 2·31	22*89 17*92 26 74 17*99	19:94 14:63 24:57 10:63	20 21 22 23
1 9 11	10 8 14	605 449 471	71 66 66	687 547 562	1,877 2,397 3,848	15,828 17,340 20,136	*009 *40 2 00	*0009 *009 *007	11·13 16·88 12·11	*85 *83 *47	•A1 •67 •87	1*69 2*93 2*58	13-80 21-25 17-56	17:00 19:95 14:44	50 82 84
19 21 22 6 2 19 5	76 99 81 24 6 45 35	541 809 441 813 628 643 538	215 283 147 565 567 390 423	851 1,212 691 1,408 1,203 1,037 1,001	5,768 4,926 5,785 4,689 1,967 19,698 6,212	34,418 49,990 69,847 31,023 33,297 44,095 34,957	1:38 1:96 3:15 -70 -70 :82 -56	*03 *10 *07 *06 *06 *04 *74	15:84 19:03 30:05 9:04 10:14 8:39 14:84	1.61 .40 .32 .55 .81 1.34 .17	*57 *59 *36 *56 *46 *47 *58	8:91 2:41 3:06 1:88 -76 8:94 3:65	23 38 24 52 37 03 12 81 12 96 20 03 20 55	26°85 21°37 18°55 15°67 13°94 18°95	27 23 29 30 31 82 33
14 3 6 2 16	29 7 17 7 16	561 891 199 13 204	535 365 200 199 180	1,189 756 422 221 416	6,036 6,730 726 417 1,922	54,590 50,292 87,887 10,915 21,194	'34 '42 1'34 '19 '13	10 101 101 1002 105	24:42 21:32 18:58 14:49 11:35	*26 *66 *08 *03 *53	*60 *39 *23 *81 *26	8°20 8°52 °39 °59 1°23	28'94 26'34 20'66 15'63 13'58	17:05 20:31 19:00 20:66 13:59	84 35 36 37 38
53 37 26	111 51 48	406 223 201	280 100 154	850 411 429	7,200 10,330 4,866	33,8 16 19,203 24, 056	4·02 3·69 4·37	16 10 10	8'83 8'54 10'84	1°90 2°45 4°03	*49 *47 *46	4:17 11:96 5:26	19°60 22°23 26°00	20°47 20°98 24°16	39 40 41
36 4 889	30 3 1,675	832 137 40 123	154 302 146 156	537 459 252 286 27,872	1,635 8,854 1,473 2,543	20,849 26,757 8,010 15,590 1,589,532	*08 *68 *02 *18	*01 *04 *001 *002	16.21 15.35 10.50 11.32	1:06 1:07 :67	*49 *27 *45 *27	1.50 2.42 2.64 2.42 2.74	19·13 16·81 14·40 14·86	18:37 16:78 14:62 14:09	42 43 41 45
2	2	8 5 8	2	10	169 52 48	884 821 250	*64 2*93 1*18	.08	1075 17:98 12:34	3·22 2·93 5·02	*29 *82 *45	4·92 4·77 4·38	25-93 26:44 23:40	44·42 28·43 29·25	1 2 3
 	₁	. 4 8 1	1 8 2	5 12 8	90 118 66	850 873 197	*85 *51	:::	9.86 9.63 9.35	1·81 1·26 •79	*28 *56 *23	4*80 5*54 5*23	17:60 17:52 15:61	29:92 36:87 32:89	• 4 5 (i
	1	1	,.,-••	3	88	135	.20		¥2.21	1.01	•25	4*20	17-20	86*82	7
:::	1 	4 1	8 2 8	8 2 4	808 19 68 23	723 149 246 148	1°51 1°97 °65 1°19	*08 	6'85 6'40 9'70 8'80	8:06 1:74 3:82 1:46	'23 '15 '82	0°17 1°50 5°54 2°10	21.54 11.78 20.07 13.56	80°95 20°49 24°06 25°57	9 10 11
 3 1	 3 	* 12 2 18 4 2	8 1 1	26 2 20 6 3	180 15 387 47 32	1,194 125 1,164 230 109	5·18 -47 7·62 2·37 3·02	 197 	18*61 9*42 12*64 7*33 4 71	6.76 *38 8.18 2.31 5.08	*67 *19 *78 *40 *54	4 64 1:42 14:60 3:19 5:80	80°83 11°89 48°93 15°62 19 78	20°72 20°84 80°40 20°05 27°40	12 13 14 15 16

App. I.]

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the

X.

1	ļ		2					3	4	5	6	7
Number.		Distric	CTS AN	t Tow	nę.			Population according to Census of 1891.	Cholera,	Small-por,	Perer.	Bowel-complaints.
17 18	1 1112			ontinuo listrict. 			:	90,818 14,815	528 59		67 4 148	34 9 67
19	Bulanda at Cala		Pergu	nnahs.				222.400				
20 21 22 23 24 25 27	Rajpore Augurpara Nawabgungo Nathatti Bassirhat							251,459 51,458 29,452 19,576 22,739 18,118 21,533 29,450 19,135	1,845 122 228 4 76 147 110 42 61	1	8,590 282 349 52 325 223 308 119 118	1,682 92 144 6 66 66 54 9
28 20 30 31 32 33	Meherpore .	Nude	dea Di				::	27,477 8,083 29,087 9,077 5,781 14,105	87 92 69 11 29 96	1	818 43 176 136 76 181	21 7 8 20 16 18
34	Jessore	Je380	ore Dis	striet.				8,495	25	******	134	8
95 96 97 88	Berhampore Kaudi City Murshidaba Jungipore		 		ct.	•••	:::	23,605 10,661 89,231 10,187	153 78 723 24	•••••	498 141 1,300 129	75 21 93 80
30 40	Satkhira Khulna	• •••	na Dis				:::	8 738 6,178	7	2	111	1 8
41	Ihnajpur		•••	istrict. 		•••		12,560	Q	*****	183	49
42	Beauleah	•	ihyo D 	istrict.				19,791	52	4	524	75
ន	Rungpore		ore D 	istrict. 				15,320	12		372	38
15	Bogra	_	•••		•• •••	•••		6,179	3		81	19
15 16	Pubna Serajgunge	•••	•••			•••	:::	15,207 21,037	305 41	1	301 798	30 33
7	Darjiling	Darjil		·· · ··		***		7,976	8		61	48
8	Julpaiguri		neri De 2 Dist		• •••	•••		7,947	. 8		81	28
9	Dacea Naraingunge	•••	•••	••• ••		•••	::	80,161 12,661	156 121	8	544 74	29 5 65
1	Faridpore	Faridpe Backergu						10,263	178		115	20
12	Barisal	•••	•••	··- ·-				13,186	40		165	n
53 54 56	Jamalpore Kishorgunge Tangail	My men 				•••	:::	16,091 12,498 28,124	21 124 60	1	263 109 820	83 \$ 22
5G	Chitiagong	Chittage 				**		22, 80	8		301	67
57	Sudharam	Neakh Tupper	,	···ict. ····································	•			5,721	8		15	3
58 59	Comillah Brahmanberiah				· •••	•••		13,506 17,543	85 205		911 226	35 50

 \mathbf{x}^{i}

Districts and Principal Towns of the Benyal Province during the year 1886—continued.

					9	10					11				15
		INJUR	у.			ALL	R	TIO ·	OF DEAT	HS PI	SR 1,000	OF POI	TLATI	ON.	
Suic	IDE.	ents.	led by							si.			From Cau	All.	
Male.	Female,	Wounds or Accidents.	Snake-bite or killed Wild Beasts.	Total.	All other Causes.	TOTAL DRAINS PROM CAUSES,	Cholera,	Small-por.	Fever.	Bowel-complaints.	Injury.	All other Causes.	For the year.	Mean of previous five years.	Number.
. 3		35	3 3	44 8	467 44	2,05G 311	5°81 3°19		7·42 9·98	3:77 3:54	*48 *20	5°14 2°96	22·63 20·99	28'81 22'40	17 16
4 2 1 	10 3 2 1 1 3	85 12 5 8 8 7 4	10 6 8 6 2 4 7	109 23 11 15 10 12 11 1	2,954 88 150 52 49 111 62 49	10,187 008 843 129 523 560 545 220	7:83 2:86 7:80 7:87 8:34 8:15 5:10 2:05 8:18	-02 -01 -03 -05 	14-27 5-45 11-64 4-91 14-29 12-37 14-30 5-81 6-16	6:68 1:78 4:80 5:66 2:90 3:66 2:50 -44 1:09	*43 *44 *86 *1*41 *43 *66 *51 *04 *88	11.74 1.70 5.00 4.91 2.15 6.16 2.87 2.39	40.51 11.70 29.45 72.19 28.13 81.08 25.30 10.75 11.49	45*49 18*62 26*18 18*72 24*26 22*69 81*62 28*65 17*45	19 21 21 22 24 24 24 25 27
 1 1 	1 2 	7 1 8 	5 2	15 1 8 8 .•	148 7 46 11 15 72	584 85 305 186 136 317	3 16 3 68 2 32 1 13 5 06 6 80	"ii 	11:30 4:95 5:92 13:99 13:26 9:28	'76 '11 '20 2'05 2'79 1'27	*54 *11 *26 *82	5°38 '80 1°54 1°13 2°61 5°10	21·25 9·78 10·27 10·14 23·73 22·47	40°39 28'79 27'04 18'00 54'37 26'30	28 29 30 31 32 83
	1	3		4	18	189	2.94		15'77	*94	*47	2.11	22.54	33.10	36
 1	 	11 1 15 5	7 8 12 1	21 4 27 7	113 10 274 51	800 194 1,817 201	6·48 1·68 3·13 2·35	::: ::::	21·09 13·22 33·13 12·66	3·17 1·96 2·37 7·85	*88 *37 *68 *68	4:78 '93 6:98 5:00	36:43 18:19 46:31 28:56	25:71 27:10 36:90 30:23	85 86 87 88
	:::	3	2	5 J	24	132 188	*80 7*93	-22 	12 ⁻⁹³ 17 ⁻⁹⁶	·11 ·48	*57 *16	*45 3*88	15·10 30·43	23.68 Data not avail-	39 40
		4	1	5	5 9	305	.71		14.27	3.00	.39	4.69	24.58	able. 19:18	41
1	1	15	ā	22	56	733	2.63	.20	26.47	3.78	1.11	2.82	37:03	31.55	42
2		4	1	7	71	. 500	-90		27:92	2.82	-52	5.83	37.53	29:72	43
					16	119	•48		13-10	3.02		2.28	19*25	33.33	41
		4 9	1 3	5 12	75 67	517 951	6*87 1*9 <u>4</u>	.06	19 [.] 72 37 [.] 93	1.86	*82 *87	4:91 3:18	33-86 45-20	27·70 25·71	45 46
		2	1	3	44	159	-37		7.64	6.01	*37	5'51	19:93	17:30	47
		5		5	45	162	-37		10:19	3.25	*62	5.66	20:38	13.96	48
2	1 1	15 4	 	18 5	777 130	1,788 390	1.94 9.63	:60 :07	6.48 2.88	3·55 5·17	*65 *38	9:49 10:34	22:30 31:52	28-96 23-92	40 50
	1		2	8	21	337	17:84		11:20	1.84	-29	2.04	32-83	28:45	51
1	1	6	******	8	63	287	8.03		12.21	-83	•60	4.77	21.76	20.40	52
1	₁	 3	1 3	8	67 30 29	436 268 440	1:30 9:61 8:31	 •05	16:31 46 17:63	5°15 '88 1°81	*12 *44	1.00 5.35 7.16	27:09 20:77 24:27	20:84 25:04 17:71	53 54 55
2		12		14	85	470	13	***	13.60	\$.05	• 6 2.	3.84	21.53	24:49	56
2			1	3	25	57	1.26		8-61	-58	.28	4'87	11.15	15:61	67
	1	7 5		8 5	5 <u>9</u> 145	891 631	11.68 0.58	***	12:88 15:62	2.23 2.23	*59 *28	3°85 8°26	28'95 86'96	20:63 23:88	5% 59

1				2						3	4	5	в	7
Number.		n	ISTRIC	RA BT	♥ ID To	w 76 .				Population according to Census of 1881.	Cholera.	Small-poz.	Fever.	Bowel-complaints.
			TOW	NS—c	onclud	led.								
60 61 62 63	Patna Behar Dinapore Barrh			•••	strict. 	 		 	::: ::: :::	100,237 48,471 52,225 23,610	924 24 177 36	3 12 1	2,044 295 454 266	90: 9 14 15
6 ł 65	Gya Daudnagar	 	<i>G</i> ₃ 	a Dis					:::	76,121 9,870	716 7	2 21	1,437 291	41
66 67 68	Arrah Dunraon Buxar	•••	Shaha: 	bad D 	istric 	ι. :::	***	•••	:::	43,465 17,835 1 7, 668	18 67 113	1 26 3	115 807 276	1 6 4
69 70 71	Mozufferpore Sitamurhi Hajeepore		 Lozuffe 							42,742 6,125 25 6 5	224 3 123	17 7 6	511 105 162	17 2 15
72 73	Laigunge Durbhanga	•••	::. Durbha	•••	•••	•••				16,783 68,006	10 87		239 787	32
74 75	Chupra	···	Sarun 		rict.		···	:::	:::	53,249 18,307	92 47 72 (3 2 4	282 763 130	10
76 77	Revilaungo Bettuh	 	 Thumpa 	 run 1	 Distric	 :t.				12,498 21,263	1	15	481	2
78 79 80	Monghyr Jamalporo Shaikpura	•••	Mong!	hyr D 	istric: 	:::	•••	•••		57,520 13,563 12,517	83 20	10	789 103 850	25 7
81	Bhagulpore		haquly 			ct. 	***			57,458	263	******	736	24
82	Purnesh	•••	Purne Malde		strict strict.					15,016	11	4	849	ε
53	English Baza	Sont	hal Per	-						12,430	1		, 91	
84 45	Deoghur Cuttack		 Cutta	 ck Dis 	 strict. 					8,005 43,239 15,697	4 6	2	166	1
86 87	Kendrapara Jajpur		 Puri			•••	•••	•••	:::	11,233	104 42	6	139 87	5 4
89	Puri Balasore		Balasa 	 re Di 	strict	•		•••		20,265	623 152	1	234 171	24
90	Huza ribagh	•••	lazarib 			•••	•••			15,906	6		91	ង
.	Ranchi	•••	Lohard Sinybhi			•••	•	•••		18,443	1	441000	263	4
92 93	Chyebassa Purulia	 	Manbh	 um D :	 is/rict	•	•••			9,804	2	•••••	86 103	2
		•			To	otal i	ior To			2,409,578	9,935	204	29,615	9,10
	! 		т	JATO	FOB 1	HE :	Provi	RCB	· -	66,163,884	118,368	4,040	1,057,296	55,69

Office of the Sany. Commr. for Bengal,

The 8th March 1887.

Districts and Principal Towns of the Bengal Province during the year 1886-concluded.

}	m-z.	· -	8	5		0	10		***************************************	- ~ #	1	-				12
	_		INJURY	· · · · · · · · · · · · · · · · · · ·		一十	3	RA'	rio oi	F DEATH	8 PEB	1,000 O	F POPU	LATIO	v.	
S	rer	DE.	idents.	killed by		3	B FROM				13.	• .	8.	From Caus	Es.	
Male.		Female.	Wounds or Accidents.	Snake-bite or k Wild Beasts.	Total.	All other Causes	TOTAL DRATHS FROM CAUSES.	Cholers.	Small-por.	Fevel.	B.wel-complaints.	ſnjury.	All others Causes.	For the year.	Mean of previ- ous five years,	Number,
		Ī	-													
	.	3 1 	68 17 12 22	12 2 3 4	83 20 15 26	1,388 180 186 196 040	5,844 649 928 630	5.76 .57 3.38 1.52	*01 *24 *04	12·75 6·02 8·69 11·26	5'62 1'91 2'69 6'39	:51 :40 :28 1:10	8*66 3*67 2*60 6*35	83°85 12°84 17°67 26°68	29:86 27:95 11:18 24:48	60 61 62 63
	:	1	66	2	69 7	1,278 59	3,921 389	9·41 *70	·02 2·12	18°87 29°48	5:50	-00 -70	16:78 5:97	51:51 89:41	48:97 20:59	64 65
:			14 8 10	2	14 12 12	42 39 68	202 517 - 520	*41 3:75 6:39	102 1:45 16	2:64 17:21 16:62	27 3.70 2.71	-32 -67 -67	196 218 3184	4°64 28°98 29°43	22.75 21.25 20.37	66 67 68
		:::	21 4 18 9	8 2 7 .1	20 6 25 14	201 22 94 63	1,152 164 561 400	5'24 '48 4'78 '95	*39 1*14 *23 	11°95 17°14 6°30 14°24	3:97 3:42 5:87 4:05	*67 *97 *97 *83	4:70 3:19 3:65 3:75	26:95 26:77 21:83 23:83	24:56 32:00 17:98 21:33	69 70 71 72
	.		19	3	22	486	1,619	•55	.16	11.12	4.93	•33	7:35	24.49	26.12	73
	2	,	25 9 5	1	27 11 9	196 190 66	768 492 349	1.72 3.53 5.76	*05 *15 *32	5-29 12-24 11-12	3·15 5·93 4·72	*50 *82 *72	8°68 14°27 5°28	14·42 36·97 27·98	24°63 22°99 34°65	74 75 76
			7	4	11	135	668	.04	•70	22:62	-94	-21	6:34	31.18	24.83	77
		 	29 9 8	8 2 6	37 11 14	314 137 35	1,485 431 411	1:44 1:47	:17 :::	13:69 14:22 28:68	4:39 5:16 :23	*64 *81 1*11	5:45 10:10 2:79	25:81 31:77 32:83	26:86 40:03 30:19	78 79 80
	1	1	30	2	34	770	2,050	4.22		19:81	4*29	-29	13:40	\$5.68	41159	81
			Đ	ສ	11	51	481	.73	*26	23-24	3.66	•7 3	3.39	32.03	38:22	82
		·••	2	1	3	10	106	-08		7:32	.08	*24	*80	8.25	25:10	83
			3		1	50	214	5.74	*40	12:36	1.74	-12	6.54	26'73	23136	84
; ;	2 1 1		10 2 2	 3 3	12 6 7	395 160 36	674 465 221	1·15 6·62 3·73	*64 *38	3°83 6°85 7°74	1·13 3·18 4·36	*27 *38 *62	9·13 10·19 3·20	15°58 29°62 19°67	23.82 28.75 19.05	95 80 87
	2	2	5	4	13	371	1,484	25.13	-04	9.44	9.76	-52	14.96	59-87	58'62	88
1	1	1	9		11	114	599	7.20	-30	8.43	7.15	*54	5.62	29.55	30.08	89
1			2		2	52	186	-39		5-94	2.38	-18	3-39	12.12	24.82	90
1	1		8	1	10	54	375	-05		14:26	2.24	*54	2.92	20:33	17451	91
	1		Б	2	8	Ð	128			14'31	4.16	1:33	1.49	21.31	25-97	92
-	2	1	- 7	<u></u>		21	. 160	-		11.07	2.57	1'07	2:25	17:19	26.24	93
-	57	G5	808	210	1,200	15,704	65,773	-	.08	12.70	3.77	-50	6.21	\$7*29	29.41	
•	946	1,740	14,610	11,785	29,081	190,818	1,455,306	1.78	90	15.97	.84	'43	2.88	21.99	20:35	<u> </u>

R. LIDDERDALE, M. D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

	•		A:	NUA	L Fo	orm N	To. V	II.—	Death	s regi	stered	from (CHOI	ERA	in th
	1	2					3		4						
		Districts													
Naniber.			CTS.	. •	•	ı	Number from which deaths from Cho-	Number in each	Number from which deaths from Cho.	lera were reported.	February.	March,	April.	May.	June.
-	Buro	lwan D	ivisio	ı.											
1 2 3 4 5 6	Burdwan Bankura Barbhum Midanpore Hughli Serampore		·· ··	: ::	•••	13 8 29 10	12 8 29 10	5,61 3,19 14,75 1,78	7 30 9 32 8 1,21 1 15	7 2 9 4 69 7 6	2 4 6 79 9 6	49 3 3 444 2 33	84 2 230 73	16 120 8	3 10 87
	1	di, inclu	ding S	eramp	oro		18	. }		-		_	-)	.	
7	Howrah	Districts State						25	14						
8	24-Pergunnahs, Calcutta.	exclusi	ve of		- 1	1		1	1	1	_	1	1	i	9 61
	Tot	al of 24	Perku	nnahs		32	82	5,458	1,09	86	7 600	858	520	195	70
9 10 11 12	Jessore Murshidabad			•••	:::	22 27	22 27	4,733 8,697	1,220	1,66	1,085 3 14	1,137	2,333	768 208	94 48 88 13
	Rajsh	ahye Di	vision		- 1										
13 14 15 16 17 18 19	Rajshulyo Rungpore Bogra Pubna Darjiling			•••		14 17 10 10 5 9	14 17 10 10 4 9	5,159 6,787 4,229 8,954 943	809 604 189 618 '81	51 56 41 77	46 14 6 8	12 24 3 282 1	352 250 118 2,118 4	322 410 114 546 30	32 71 217 13 4 45
	Dacca	. Divisi	02.		1		`								
20 21 22 23	Faridpore . Backergunge .		•••	•••	:::	14	14 17	3,892 4,836	987 1,073	257 202	140	687 572	8,576 N78	1,665 449	42 155 105 407
	Chillag	ong Di	vision.												
24 25 26	Nonkhuli .		**1	••	}	10	9	2,028	157	71	21	21	59	44 210	5 4 16 .
	1	ra Divi	sio n.		ì										:
27 28 29 30 31 32 33	Gya Shahabad Mozufferpore Derbhanga Sarun		 		:::	14 14 13 11 13	14 14 13 11 13	6,531 5,420 4,379 6,359 4,579	625 339 293 321 291	8 1 16	1 3 1	19 2 1	54 14 3 2 5	29 6 15 76 5	350 42 28 354 45 7
ļ	Bhagul	pore Di	vision				}					1	1		1
34 35 36 37 59	Bhagulpore Purneali		•••	•••	==	13 14 10	18 14 10	3,382 3,625 8,100	157 477 60	8 17 29	3	83 5	13 867 9	397 10	5) 98 115 4 13
	Orisea	. Dirisi	on.			}		- 1	[i			1	- 1	-
10	Puri		***			6	63	5.168	836	280	278	257	234	198	516 51 120
-	Ohota Nag	more D	ivision	l.	L		- 1	1	İ		1		!	1	

602

231,077

21,567

6,172

8,755

3,555

9,800

Office of the Sany. Commr. for Bengal,

The 8th March 1887.

TOTAL FOR THE PROVINICE

Districts of the Bengal Province during each month of the year 1886.

		• •	_ 						7				-
5					•		6			7		8	9
							TOTAL.		RATIO 1,000	OF DEATH OF POPU	S PER	during	
July.	Angust.	September.	October.	November,	December,	Male,	Female,	Total.	Male,	Female.	Total,	Mean ratio per 1,000 previous ve years.	Number,
4 23 26 129 7 7	8 69 19 19 13 9	6 11 8 41 7	42 71 2 304 72 83	237 76 95 085 187 207	521 100 307 1,002 197 277	635 237 311 2,385 387 413	594 251 281 2,217 300 297	1,229 488 592 4,632 693 710	95 - 191 1 22 2 36 - 191 1 28 - 28	*82 *46 *68 1*76 *88 1*67	*88 *48 *74 1*84 1*04 2*01	2:39 1:18 2:55 1:80 1:21 1:89	1 2 3 4 5 6
14 25		66	155	235	520	839	603 572	1,408	1.03	1.14	2:20	1°45 2°48	7
23 105 128	17 53 70	19 75 94	111 206 407	539 304 933	2,217 532 2,549	2,726 1,124 3,850	2,220 721 2,941	4,946 1,845 6,791	3°29 7°63 3°94	2°80 6°91 3°28	8·05 7·33 3·63	2°42 8°68 3°26	} s
11 3 91 18	6 39 3	5 18 8	29 2 44 6	731 66 340 63	2,611 794 669 542	3,024 4,242 940 951	3,442 3,649 798 776	7,066 7,591 1,738 1,727	4·49 4·42 1·60 1·67	4.04 3.78 1.24 1.51	4*26 4*06 1*41 1*59	5.02 3.15 2.52 2.33	10 11 11 12
21 155 52 2 70 48	 136 62 76 58	36 1 2 2 2 2 2 3 3 3 3 3 4 5 6 5	95 407 132 1 	104 15 1,593 278 38 3 657	155 147 2,570 149 208 2 188	976 573 3,194 501 1,758 146 722	257 476 2,933 468 1,477 85 609	633 1,049 6,127 969 8,235 281 1,330	*48 86 2 99 1 *34 2 71 1 63 2 2 36	.35 .70 2.44 1.29 2.22 1.27 2.20	*41 *78 2:92 1:81 2:46 1:47 2:28	164 8137 190 1176 2124 155 1102	12 34 15 16 17 18 19
12 k 23 12 k	19 21 28	37 6 17 21	41 5 13 26	8 76 29 12 249	8,690 854 540 554	3,228 4,056 1,67 t 3,825	3,154 3,339 1,353 3,846	6.382 7,395 3,027 7,171	8:12 5:03 1:71 2:46	2°91 4°04 1°45 2°28	3-01 4-53 1-59 2-34	2:18 2:63 2:89 1:46	20 21 22 23
1 	1 10 3	2 8	19	 4 15	96 420	10 191 1,69 0	8 161 1,579	13 352 3,269	.01 .45 2.10	*004 *39 2*10	*01 *42 2*15	1:09 :78 1:52	2 4 25 26
466 278 235 141 147 210 22	770 923 903 148 62 829 228	856 1,068 748 110 92 401 272	994 1,063 2,049 270 188 332 141	639 1,143 1,907 833 489 402 213	176 119 234 544 422 206 69	1,737 2,402 3,170 1,232 089 1,124 619	1,468 2,267 2,964 886 861 900 438	3,205 4,729 6,140 2,118 1,850 2,024 952	2:09 2:35 8:34 -97 -76 1:03 -59	1.63 2.09 2.92 -67 -64 -75	1.82 2.23 3.13 .82 .70 .88	1'64 1'90 1'93 2'60 1'67 1'08 1'97	27 23 29 30 81 82 83
16 58 62 1 6	27 89 1 12	30 41 25	272 197 167 72	317 366 772 	63 221 530 75 40	389 542 1,323 73 146	360 528 1,163 61 100	740 1,070 2,446 184 252	*40 *55 1*41 *21 *18	*85 *53 1*27 *16 *13	'38 '54 1'34 '18 '16	1°50 1°76 1°46 2°81 1°82	34 85 86 37 85
476 702 234	278 353 62	142 82 22	822 149 77	587 674 323	63 3 658 571	3,550 2,024 2,169	8,590 1,789 2,053	7,140 3,813 4,222	4·04 4·53 4·70	3·91 4·04 4·24	8·97 4·29 4·46	8·74 8·40 4·77	39 40 41
3 431 1	8 229 22	8 92 7	 3 41	18 27 	. 1 10	55 606 4 84	40 479 9 63	95 1,085 18 147	'10 '78 '01 '15	'07 '59 '03 '11	*09 *67 *02 *13	1:08 -20 -25 1:03	42 43 44 45
4,542	6,234	4,186	8,054	16,090	24,178	62,955	55,418	118,368	1.01	1.06	1.78	1.88	

App. I.]

Annual Form No. VIII. - Deaths registered from SMALL-POX in the

1			2				1	3		4	<u> </u>				
				•	•			LRS OF BATION.	VILI	AGES.					
rumeer,		Disi	ricti	1.		• •	Number in each District.	Number from which deaths from Small- pox were reported.	Number in each District,	Number from which deaths from Small- pox were reported.	January.	February.	March.	April.	May.
	В	urdwa	n Div	ision.											1
1 2 3 4 5	Burdwan Bankura Birbhum Midnapore Hughli Serampore	***			···		20 13 8 29 10 8	5 4 1 7 2 2	8,687 5,617 8,190 14,758 1,731 924	5 11 10 49 4	4 2	3 1 4 2	1 1 1 4	11 11 3 	
	Total of Hugi	ili, inc	luding	Sera.	mpore		18	4	2,055						<u> </u> -
7	Ilowrah	•••	•••	•••			8	2	1,496	6		1	•••••		
	Pro 24-Pergunnah	sidena	-				81	6			1	··· ···	1	2	1
3	Calcutta. Suburbs of Ca	-					1	1			1	1	2	1	l
	5	Cotal o	24-P	ergun	nahs		32	7	5,458	9	2	1	8	3	
	Nuddea Jessore Murshidabad Khulna	•••		 	***	 	31 22 27 15	7 4 4 8	8,072 4,732 3,697 2,890	10 3 17 2	. 1	1	2 1 2	3	
	Raj	ishahy	e Divi	sion.		- 1				Š					
	Dinajpur Rajshahye Rungpore Bogra Pubna Darjiling Julpaiguri	•••			 	•••	17 14 17 10 10 5 8	7 5 6 2 3	6,921 5,159 6,757 4,229 3,954 943 1,110	24 15 7 8 3 11 8		1	4	15 2 4 10	
	I	acca 1	Divisi	on.											
	Dacea Faridpore Backergunge Mymensing	::: :::	•••		•••		14 14 17 18	8 7 12 10	5,770 3,892 4,336 1,4676	22 8 88 88 69	8 1 16 17	3 10 16	4 2 27 20	8 5 18 17	
	Chi	ttagon	g Div	ision.											
! !	Chittagong Noakhali			•••			14 70 18	1 5 8	1,363 2,628 6,479	8 7 8		1	 5 2) 1	
	Tipperah		***	•••				ا	.,		-	-		•••••	
.	Paina	etna :	D18181				17	13	5,619	51	8	7	12	7	
	Gya Shabahad Mozufferpore Durbhanga Sarun Chumparun			•••	•••	:: ::	14 14 18 11 13 10	14 13 12 9 13 10	6,531 5,420 4,679 6,359 4,578 7,766	145 109 95 265 68 402	15 21 2 2 33	12 12 24 27 9 37	28 33 42 35 10 104	37 27 34 28 15 220	3 2 2 2 3 3 3
İ	Bha	gulpor	e Div	ision.			1	ĺ							
- 11	Mongbyr Bhagulpore	•••	••		•••	:::	14 13	11 6 7	3,975 3,883 3,625	186 12	4	2	42 8	47	5
- 1 :	Purneah Maldah Sonthai Pergu	 nnahs	···			==	10	9 6	8,100 11,254	16 2 36	7	5 18	1 10	4 1 21	*****
	o	rissa I	Divisi	0%							!		!	l	
13	Cuttack Puri Balasore	•••	 	•••	•••	::;	18 6 10	12 6 10	8,912 6,166 6,393	822 60 180	88 5 87	78 12 106	105 9 58	4½ 20 32	1 1 1
	Chota								1		-				_
	Hazaribagh			***	•• 		17	7	7,704	7	.3	,1	1	1	••••
- li	Lohardugg a Bingbhuin Manbhuin	•••	•••	•••	•••		22 6 17	3	8,018 8,128 6,140	53 1 6	10		1 1	16	1
	TOTAL	POR 1	ran P	BOAI	NCB		645	280	281,077	2,255	288	414	596	667	69

Office of the Sany. Comme. for Bengal,

The 8th March 1887.

xvii

Districts of the Bengal Province during each month of the year 1886.

	5		Jenes W			•	•	ď			7		8		9	10
								TOTAL	•	Numi THESK AM CHIL	DER OF DEATHS ON O DREN.	TOTA 1,000 o	L RATIO	PER	of previous	
June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under 1 year.	Under 12 years.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years,	Number,
1 4 3 2	1	1 1			3 2 2	 2 1	4 15 3 12 2 2	3 16 4 8 2 1	7 81 7 20 4 3	1 8	1 8 6 2 1	*005 *02 *007 *009 *006 *01	*004 *02 *009 *006 *005 *005	*805 *02 *008 *007 *006 *008	*07 *02 *02 *17 *08 *04	1 2 3 4 5 6
						2	1	* 2	3		2	800	.006	.004	-05	7
 - ·				2	 1		2 4 6	4 3 7	6 7 13			-002 -03 -006	*005 *02 *007	-008 -03 -003	*03 *40	} *
1 s	1	3 3		2	1 3	1 	5 1 10 1	6 3 8 3	1) 4 18 4	2 2 	7 2 1 3	-000 -001 -001	*007 *003 *01 *005	-006 -002 -01 -003	*05 *01 *11 *006	9 10 11 12
3 4 	8 3 4 6	3 1 1	5 1 1 	 	1	2 	32 11 3 2 17	27 9 11 7	59 20 14 2 24 4	1 2 	6 1 2 1 1	*04 *01 *002 *003 *19 *01	*03 *01 *01 ****************************	*63 *61 *006 ******************************	'01 '02 '002 '008 '004 '13 '01	18 14 15 16 17 18 19
2 3 16 8	5 2 2	3 4 3	2 2 2	2 2 4	1 4 15	3 2 25 2	31 8 88 88 35	19 9 57 63	50 17 145 98	5 12 10	27 50 19	*02 *009 *09 *02	*01 *01 *66 *04	*02 *01 *07 *03	*11 *12 *21 *13	20 21 22 23
						 1 2	1 5 1\	₃	1 8 11	******	1 4 5	*001 *01 *01	-007	*0008 *009 *007	•39 •65 •23	24 25 26
27 87 80 43 29 243	4 9 18 18 11 17 133	11 15 8 3 3 9 107	33 3 4 1 3 18	9 4 8 1 5 7	227 1 1 7	3 8 16 5 10 2 10	32 110 68 92 83 61 648	34 133 78 97 96 58 6 34	68 243 166 180 179 110 1,283	13 73 43 96 46 82 419	212 212 165 131 128 113 1,178	*08 *10 *09 *07 *06 *05	*04 *12 *07 *07 *07 *04 *74	*03 *11 *08 *07 *06 *05 *74	*48 *15 *14 *16 *37 *70	27 28 29 30 31 82 83
20	14 1 12	10 5 2 	s s	1 1	11 2	6 2 3	121 11 19 1 39	92 12 17 1 44	213 23 36 2 83	78 1 2 18	200 12 19 47	-12 -01 -02 -002 -004	-09 -01 -01 -002 -05	*10 *01 *01 *002 *05	*80 *85 *02 *05 *09	84 85 86 87 88
1 7 6	6 8 6	3 5 2	1 1	4 5 5	4	16 4 57	133 52 182	167 40 20 0	300 92 382	78 25 70	300 66 225	*15 *11 *89	·18 ·09 ·41	*16 *10 *40	1·22 1·55 ·62	39 40 41.
12 	1 6 1	4				1 	• 6 46 1 3	5 33 	11 79 1 3	1	 1 2	*01 *05 *003 *005	*008 *04 	*009 *04 *011 *002	·25 • ·22 ·15 ·05	42 43 44 45
470	292	213	88	65	72	186	2,038	2,011	4,040	972	2,991	*06	-08	-06	.53	

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner of Bengal.

Annual Form No. IX.—Deaths registered from FEVER in

			2							3 •	, 4	<u> </u>				 -	
					, (····			CIRCLE REGISTION	THA-	VILL						
			D18T	RICTS.	,	•	,		Number in each District.	Number from which deaths from Fever were reported.	Number 10 each District.	which deaths. from Fever were, reported.	January.	February.	March.	April.	May.
./ 		B	urd 100	ın Div	ision			Ī									1 201
	Bankura Birbhum Midnaporo Hughli					 			20 13 8 29 10 8	20 13 8 29 19 8	3,667 5,617 8,199 14,758 1,731 924	3,033 3,736 2,632 9,551 1,604 697	1,785 950 848 8,309 923 440	1,631 1,019 750 2,969 872 265	1,930 1,224 901 3,028 937 818	1,660 1 199 932 2,710 681 263	1,521 1,140 828 2,502 648 252
· ·	Serampore Total	of II	 ughli,	inclu	-				18	18	2,656	2,301	1,963	1,137	1,255	944	900
,	llowrah		•••		'				8	8	1,496	1,065	548	399	487	420	821
	24-Pergunn)			n <i>cy Di</i> e of Su			alcutte	a	81	31			2,065 341	1,525 269	1,541 238	1,363 232	1079 242
1	Suburbs of (Calcu	LLEL	otal of	•••	•••	•••	•••	32	32	5,458	4,286	2,400	1,794	1,779	1,595	1,321
1	Nudde a Jessore Mucshidaba Khulna	 di						::	31 22 27 15	31 22 27 15	3,072 4,702 3,697 2,890	2,882 4,099 3,240 2,523	2,673 4,466 1,530 2,085	2,399 2,921 1,315 1,314	3,157 2,722 1,557 1,243	2,909 2,819 1,770 1,159	2,789 2,099 1,585 1,015
		Ra	jshak	ye Div	isio n .									0 (71)	2,800	2,673	2,438
	Dinsjpur Rajshahye Rungpore Bogra Pubna Darjibng Juipanguri				***				17 14 17 10 10 5 9	17 14 17 10 10 5	6,921 6,159 6,737 4,229 3,954 943 1,110	4,372 2,630 2,631 319	8,005 8,474 5,326 1,418 8,746 129 1,414	2,672 2,225 4,078 1,036 2,800 181 1,230	2,162 4,732 1,184 3,142 156 1,405	2,073 2,312 4,342 1,217 3,888 185 1,753	2,630 8,909 979 8,599 146 1,440
'	o tarpare, and	•••		eca D	inisio	12.					ľ						_
3	Dacea Faridporo Hackergun Mymensing			, , ,	•••	 	 	:::	14 14 17 18	17	5,770 3,892 4,336 14,676	2,585 2,810	3,186 2,864 3,086 3,453	2,123 1,643 1,964 2,709	1,972	2,492 1,673 2,648 3,140	2,34 1,55 1,98 3,08
		Ch	ittage	ng Di	vision	ı.							İ			863	96
հ 5	Chittagong Noakhali Tipperah		:::		 	•••	:	•••	14 10 18	10	2,62	1,877	1,293 1,411 1,890	1,187 1,017 1,378	998	977 1,316	1,12
7	Patna		<i>Pa</i>	alna L 				••• ••	17		6,53	1 5,200	2,603	1,213 1,721 2,079	1,833	1,411 2,172 2,314	1,59 2,09 2,17
500123	Gya Shahabad Mozufferpe Durbhangi Sarun Chumparu		···					::	14 18 11 12 16	3 13 1 11 3 38	4,57 6,85 4,57	9 3,567 9 2,197 8 2,238	1.765 2,292 968	1,476 1,678 970	1,628 1,389 930	1,576 1,777 1,255 1,605	1,81 1,50 1,11 1,71
		В	sagulz	po re D	ivisio:	n,							2,965	2,645	3,058	2,700	2.79
15 15 16 17	Monshyr Blagulpor Purnesh Maldah Sonthal Po		 mahs	••• ••• •••					1	8 1: 4 1: 6 1:	3,62	2,600 5 3,474 0 2,298	2.839 3,126 715	2,068 2,310 72	9 2,365 6 2,855 8 704	2,879 8,134 867	2,6 2,8
			Ori	ssa Di	vision	.							2.412	1,85	1 1,475	1,191	8
39 40 41	Cuttack Puri Balasore	•••	•••	•••	•••	•••		•••		6	3 5,16	6 1,477	270	17	3 162	228	2
		Ci	ota N	lagpor	e Div	ision.		•		_		4 4,519	1,268	96	7 1,136	1,490	1,4
42 43 44 45	Hazaribas Lohardus Eingbhum Manbhum	KM	•••	•••	*** *** ***	•••	•••	•••		3 2	8,01 3,12	3 4.526 3 1.756	1,345	1,28	4 1,881 2 531	1,615	1.6
•	1		-	AL PO		. 31ma-	77 W C &	•••	64	5 64	231,07	7 149,90	5 89,884	68,08	8 74,20	77,06	9 71,

OFFICE OF THE SANY. COMMR. FOR BENGAL,

The 8th March 1887.

xix

the Districts of the Bengal Province during each month of the year 1883.

	5	•						8			7		8	0
						•		Total.		PR	O OF DEA R 1,900 O	P	0 of pre-	
June.	July.	Angust,	September.	October.	November.	December	Vale.	Female.	Total.	Male.	Female,	Total.	Mean ratio per 1,000 of vious five years.	Number.
1,350 864 751 2,218 433 201	1,325 812 727 2,847 518 179	1,575 1,025 985 2,836 643 232	1,563 968 985 2,603 711 820	1,642 997 1,008 5,212 866 407	2,328 1,404 1,267 4,073 1,229 554	2,702 1,561 1,748 4,905 1,569 632	11,001 7,152 5,954 19,191 6,113 2,126	9,921 6,006 5,671 17,412 4,917 1,937	21,012 13,159 11,625 36,603 10,030 4,063	16:59 14:10 15:60 15:43 16:20 12:19	13.71 11.23 13.73 13.68 14.15 10.90	15.09 12.63 14.63 14.55 15.12 11.54	22:80 18:00 22:67 15:52 17:40 11:77	1 2 3 4 5 6
634	097	875	1,031	1.273	1,783	2,201	7,239	6,854	14,093	14.77	13.05	13 88	15.45	
281	333	461	400	464	807	776	8,209	2,498	5,697	10.13	7:80	8:96	H-74	7
1,051 185 	1,248 234 1,482	1,577 296 1,873	1,450 293 1,743	1,803 389 2,142	2,485 451 2,036	3,864 470 3,834	11,159 1,963 13,122	9,392 1,627 11,019	20,551 3,590 24,141	13'47 13'33 13'45	12:31 12:60 11:89	12:60 14:27 12:91	15:31 17:04 15:54	} s
2,001	1.747	2,640	2,541	3,281	4,729	4,255 5,271	10,811		85,211	23'96	18:70	21·26 18·03	32.93	9 10
1,628 1,350 793	1,801 1,273 1,030	1,799 1,599 1,100	2,242 1,815 1,553	2,944 2,576 1,692	2,290 2,761	5,271 3,134 3,220	18,894 12,056 9,576	15,900 16,090 10,437 9,395	31,944 22,493 18,971	19%9 20%5 16%4	16:41 16:29 18:36	18'03 18'33 17'56	20°84 22°98 18°21	111
2,129 1,838 3,537 912 2,178 216 1,265	2,141 1,626 3,546 1,172 2,024 284 1,583	2,591 2,214 4,020 1,304 1,912 244 1,198	2,700 2,257 4,400 1,453 2,249 500 1,208	3,607 8,807 4,861 1,439 2,914 278 1,549	4,661 4,212 6,391 1,800 8,718 255 2,035	4,655 5,050 7,768 2,338 4,148 239 2,128	20,530 17,914 31,217 8,793 20,028 1,508 9,920	15,701 15,343 25,698 7,518 16,288 1,046 8,120	36,231 33,287 56,910 16,311 36,316 2,554 18,040	26°24 27°17 29°23 24°59 30°89 16°86 82°46	21'44 22'61 24'93' 20'78 24'55 15'67 20'41	25:02 24:86 27:12 22:21 27:68 16:35 81:01	16:83 27:12 16:39 19:87 20:86 7:08 16:72	18 14 16 16 17 15
1,747 993 1,669 2,741	1,695 943 1,769 2,750	1,705 991 1,778 2,541	2,162 1,112 1,785 2,800	9,756 1,455 2,513 3,431	8,642 1,920 5,254 3,935	4,016 2,492 6,113 4,377	15,932 10,454 16,122 21,010	14,213 8,682 15,810 10,947	30,145 19,136 31,932 37,957	15'41 12'97 16'56 13'52	13'12 10'51 17'04 11'80	14°24 11°72 16°79 12°43	13-63 10-18 14-96 7-39	20 21 22 23
949 1,056 1,179	1,097 1,116 1,196	991 1,103 1,232	961 962 1,394	1,065 1,058 1,785	1,006 1,870 2,058	1,185 1,593 2,314	6,649 6,714 9,680	6,012 7,073 8,783	19,661 13,787 18,463	12:50 16:16 12:55	10.00 17.44 11.78	11'19 16'79 12'15	11:69 15:39 10:15	24 25 26
1,928 2,759 2,682 1,677 2,069 1,545 1,763	1,929 3,038 3,216 1,636 2,163 1,656 1,781	3,671 4,749 5,016 1,878 2,302 2,388 2,231	2,731 5,269 8,087 2,083 2,449 2,259 2,274	3,306 5,127 9,619 2,318 2,883 2,001 2,385	3.204 5,782 10,157 3,164 3,922 2,153 3,984	2.526 8,500 7,151 8,097 2,963 1,725 8,088	15,813 20,724 29,647 13,784 15,049 10,879 14,144	12,573 10,812 27,732 9,772 11,731 8,186 11,573	26,386 40,536 57,379 23,556 26,780 19,065 25,717	16:08 19:86 31:19 10:89 11:61 10:04 16:24	18:99 18:32 27:58 7:42 8:78 6:83 18:59	15*01 19*07 29*20 9*12 10*16 8*36 14*93	16:18 17:18 14:05 9:42 9:93 7:39 9:97	28 29 50 31
3,125 2,839 2,303 499 1,225	2,787 2,879 2,196 518 1,555	4,557 8,439 2,203 5×6 1,908	4,463 4,313 2,061 650 2,000	5,808 5,066 2,601 1,190 1,776	7,957 5,518 4,247 1,840 1,642	4,520 4,579 4,561 1,759 1,768	24,721 21,641 19,414 5,884 9,871	22,692 19,7%6 15,006 4,822 7,964	47,418 41,447 84,420 10,206 17,835	25:50 22:12 20:70 16:95 12:56	22°67 20°04 16°46 11 89 10°17	24:07 21:08 18:61 14:36 11:37	14'16 15 82 17 06 17'88 10'95	34 36 36 37 38
811 173 469	875 161 495	973 182 750	991 216 780	1,151 261 972	1,314 499 1,496	1,692 752 1,823	7,898 1,539 5,035	7,736 1,756 5,164	15,632 5,295 10,199	8.09 3.44 10.81	8'43 3'97 10'67	8'70 3'70 10'78	8:20 4:32 7:62	39 40 41
1,312 1,428 353 965	1,320 1,524 420 979	1,850 2,094 454 1,349	1,865 2,080 487 1,186	1,811 1,839 402 888	1,895 2,027 571 920	1,774 1,640 604 1,034	9,339 10,563 3,084 6,468	8,730 ₀ 9,310 2,677 5,541	18,069 19,873 5,761 12,009	17-13 13-25 10-97 12-51	15:50 71:45 9:52 10:89	16:35 12:34 10:25 11:34	14°90 12°54 10°48 9°94	42 43 44 45
65,208	67,106	83,144	80,392	104,657	132,654	133,199	560,813	490,483	1,057,296	17:26	14.71	15.07	14'48	-

Annual Form No. X .- Deaths registered from BOWEL-COMPLAINTS

_																
-	1		2					3		4				-		
							REGIS	CLES OF	v	LLLAGE	- 1					
Number.		Dis	TBICT	8.	. •	••	Number in each Dis- triet,	Number from which deaths from Bowel-		Number from which deaths from Bowel.	reported,	Pohmare	March	April	May.	Јиве,
	B	urdwa	ın Dir	oision							1					
1 2 3 4 5 6	Burdwan Bankura Birbhum Midnepore Hughli		***			 	, 20 , 13 , 8 29 10 8	2 1	8 8,19 9 14,7	17 29 58 1,87 51 56	06 79 72 4 52 1	45 7 82 8 50 1 36 1	29 8 60 18 17	57 4 185 19 19	39 1 3 78 25 46 8 56 4	5 54 51
	Total of Hu	ighli, ii	ncludi	ng Se	гашро	re	18	1	8 2,6	55 84	14 2	N6 2	23 2	14 10	12	105
7	Howrah	•••		•••			8		8 1,49	6 64	1 2	94 2	06 1	92 13	11.	3 107
	Pre	ssidenc	y Div	ision.	•											
	24-Pergunnah Calcutta.			of S	luburb	1	31	81		•••••	1	18 10	į	98 8 98 8	-	1 1
	C Suburbs of Ca	ncurui Total o	 f 24-P	 orgun	 nahe		32	39	_	_				11 17		_
9	W-sad					ľ	81	29		-	-	_	26 :	8	4 37	24
10 11 12	Jessore Murshidabad Khulna	 			 		22 27 15	20 20 25 15	4,73 3,69	7 10	9 3	0	8	2 1 8 2 3 1	7 3	3 10 1 3 21
	Ra	ishahy	e Div	ision.								}				
13 14 15 16 17 18 19	Dinajpur Rajshahye Rungpore Bogra Pubra Darjding Julpanguri						17 14 17 10 10 5	16 12 17 8 10 5		24 24 21 21 21 21 21 21 21 21	3 1 1 2 1 3 3 3	1 1 2 7 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 2 3 3 6 3	6 8	1 10 2 38 7 7 5 30 6 88	33 5 14 116
	T.	Dacoa i	Divisi	on.												
20 21 22 28	Daces Faridpore Backergunge Mymensing	 	•••	•••	••• ••• •••		14 14 17 18	14 13 17 18	5,770 3,892 4,336 14,670	259	10	8 5	2 7	0 57	47	208 37 44 234
	Chit	t o yong	Divi	sion					1							
24 25 26	Chittagong Noakhali Tupperah		•••	:::	:::	-	14 '0	14 10 13	1,868 2,628 6,478	140) 2	8 1	2 3	2 33	31	39 37 47
	1	alna 1	Divisi	on.						1			1			
27 23 30 81 82 33	Petna Gya Sha'nabad Mozufferperz Durbhanga Sarun Chumparun	•••					17 14 14 13 11 13 10	17 18 14 18 11 13	5,619 6,531 5,420 4,579 6,359 4,578 7,766	383 391 686 604 925	111 221 221 200	50 51 77 176	20 21 116 157	54 546 5 94 926 204	45 15 128 214	342 68 37 150 104 216 26
	Bhag	jul po r e	Divi	sion,												
34 35 36 37 38	Monghyr Bhagulpore Purneah Maldah Sonthal Pergur	iii iii iii iii	•••		•••		14 13 14 10 6	18 13 13 7 6	3,975 3,882 3,625 8,100 11,254	334 654 132 25 413	105 105 1 1 80	77	88 11	121 21 2	51 130 88 78	48 96 27 1 31
	i	rissu I	divisio)	n.]					
30 40 41	Cuttack Puri Balasore	•••	•••	 	•••	:::	18 6 10	13 6 10	8,912 5,164 6,393	2,020 1,156 1,970	419 230 522	189	376 168 426		216 107 271	245 138 239
	Chota .	Nagpo	re Di	ision		•							1		1	
42 43 44 45	Hezeribegh Lohardugga Singbhum Manbhum	•••	 	•••			17 22 6 17	17 22 6 17	7,704 8,013 3,128 6,140	949 945 385 453	32 107 58 49	39 80 36 41	36 109 61 66	71 189 59 66	60 187 42 66	65 186 78 76
	Total	FOR T	нв Рі	POA1M	CE		645	627	281,077	22,426	5,126	3,862	8,988	4,421	4,286	8,778

Office of the Sany. Comme. for Bengal,

The 8th March 1887.

in the districts of the Bengal Province during each month of the year 1886.

							б			7		8	1 8
							TOTA	L.	RATIO OF	F DEATHS	PER 1,000	of pre-	T
July.	August.	September,	October.	November,	December,	Male.	Female,	Total,	Male,	Female,	Total,	Mean ratio per 1,000 of pre- vious five years.	Number,
42 34 17 296 71 60	49 49 14 282 88 63	36 39 5 264 89 72	67 83 6 818 136 73	76 41 18 321 149 91	104 42 19 412 204 143	285 60 2,130 724	167	109	.57 .56 .15 1.71 2.29 2.88	*38 *31 *11 1*26 1*82 2*74	746 743 713 1748 2704 2781	*55 *69 *22 1*66 2*17 2*53	3 4 5
131	157	161	209	240	347	1,227	1,120	2,347	2'50	2.13	2:31	2:29	
130	166	149	189	268	270	1,130	1,088	2,218	3.2%	3.41	8'49	3.91	7
53 105 158	102 121 223	104 144 248	143 176 319	172 183	200 237 448	748 937 1,685	635 745 1,390	1,383 1,682 3,065	0.36 1.72	*80 7*14 1*54	785 6.68	7·25	} 8
20 9 13 7	29 10 38 13	8a 6 86 10	41 6 39 23	59 11 40 88	75 15 56 67	292 82 223 146	181 53 159 114	463 135 382 260	*34 *08 *38 *25	·21 ·05 ·24 ·22	-27 -06 -31 -24	*48 *14 *29 *27	9 10 11 12
10 12 28 4 20 145 9	19 9 18 4 11 85 13	23 9 23 5 16 67 15	31 15 38 2 23 38 15	61 12 57 2 27 41 13	60 20 64 5 46 27 23	219 97 264 87 198 402 78	124 62 130 15 141 325 69	348 149 894 52 339 727 147	*27 *14 *24 *09 *30 4*49 *25	16 107 112 104 120 4:86	*22 *11 *18 *07 *25 4*6 5 *25	19 20 20 13 26 172	18 24 16 16 17 18 19
157 26 46 136	142 31 41 99	108 34 38 91	309 35 36 109	445 49 34 190	670 89 112 209	2,154 864 374 1,277	1,715 259 822 937	3,869 623 696 2,214	2-08 -45 -38 -82	1.58 -31 -34 -62	1'82 '38 '36 '72	1:32 :36 :38 :31	20 21 22 23
50 18 23	42 15 16	46 14 21	29 20 48	35 25 78	56 33 134	291 142 439	229 136 356	4G0 278 795	*43 *31 *56	**************************************	*40 *33 *52	*57 *29 *36	24 25 26
294 101 42 157 189 251	539 181 119 210 143 385 84	453 226 105 205 198 853 87	379 191 111 187 204 325 43	392 173 110 174 225 461 33	327 84 67 169 274 281	2,021 708 482 1,074 1,416 1,927 215	1,647 035 256 712 1,013 1,835 95	3,668 1,241 738 1,786 2,429 3,262 810	2:35 -67 -50 -94 1:09 1:77 -24	1'88 '49 '25 '54 '75 1'11	2.08 -58 -37 -69 -92 1-13 -18	2:44 '47 '39 '93 1:12 1:83 '24	27 28 29 30 31 32 83
61 116 6	91 114 12 4 143	84 185 11 2 95	115 176 22 4 63	141 175 80 1 55	81 144 26 12 29	497 888 129 17 498	332 624 87 11 851	819 1,512 216 28 849	*50 *90 *13 *04 *63	*35 *65 *09 *03 *44	*41 *76 *11 *09 *54	*35 *81 *14 *05 *26	84 35 36 37 38
221 168 284	256 216 333	229 179 308	275 178 381	269 238 408	284 302 496	2,077 1,295 2,886	1,361 1,067 2,046	3,438 2,362 4,432	2:36 2:89 5:17	1·48 2·41 4·22	1.81 7.92 4.08	2-04 2-67 5-32	89 40 41
57 168 40 78	68 243 68 79	64 194 52 54	63 126 52 63	40 142 41 55	30 107 44 39	388 1,002 378 460	246 786 243 265	634 1,738 621 781	.71 1.25 1.34 .88	*43 *90 *86 *49	*57 1:08 1:10 *69	*85 1'40 1'55 *96	42 43 44 •45
3,891	4,800	4,620	4,954	5,708°	6,259	81,763	23,930	55,693	-98	-71	*84	*89	

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R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

APPENDIX No. II.

STATEMENT AND MAP ILLUSTRATING THE DISTRIBUTION OF CHOLERA IN BENGAL.

DURING THE YEAR 1886.

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886.

	Eg		1				,		,			
	12.			Cholera the year.	Ì	lera io car.		era in		each of	Numbi	
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cl in the circle during the		Date of last case of Cholera the circle during the year.		Total deaths from Cholern i the circle during the year.	PERIOD OF MAXIMUM INTERNITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in the raral circles.	Affected by Cholers.	Not affected by Cho- lera.
	1	Burdwan T.	34,080	March 1886		December 188	86	22	April, November and December.	1	1	*****
İ	2	Kulna ,,	10,901			Ditto		32 •	March to May, July and October to December.	1	1	•••••
	3	Ranigunge ,,	10,937	February	"	Ditto		13	February, May, July and September to Decem- ber.	1	1	*****
İ	4 5	Burdwan R.C. Selmabad ,,	27,330 71,709		::	Ditto Ditto	:::	17 61	May and December November and Decem- ber.	105 228	5	10 22
1	6 7	Royna ,, Khandghose ,,	97,190 54,981 102,748	Ditto	:	Ditto Ditto Utto	:::	19 73 70	December October to December March, November and December,	266 146 373	2 5 8	26 14 36
	9	Gangoor ,, Sahebgunge ,,	75,171	February		Ditto Ditto		31 36	December. April and December March and December	166 200	12	15 20
Surdwen {	10 11 12	Bood-Bood ,, Aungram ,, Kalina ,,	79,073 97,311 81,583	January February		Ditto Ditto	:::	39 34 86	January and March October to December April, May, November	232 266 251	8 5 16	22 26 23
Į	13	Purbusthali ,,	82,070 63,053	70:44-		Ditto Ditto		135	and December. March, April, November	183	25	10
	14	Cutwa ,,	82,943	Ditto		Ditto		172	and December. April, November and December.	167	28	1
	16	Katugram ,,	73,723	T		Ditto Ditto		171 124	April, May, November and December. March, April, November	179 182	39 16	1
1	17	Mongolekote ,	73,543 135,646	 February		Ditto		14 71	and December. Slight	29 0	5 6	2
Į.	19 20	Kaksa ,,	38,989 98,842	T. ma		Ditto August		9	Slight	310	3	8
		District Total	1,301,823	January		December	•	1,229	March, April, November and December.	3,667	194	3,4
(21	Bankura T.	18,747			December		16 11	January, March and December. July, November and	13 Not sep	2	
	22 23	Bissenpore ,, Sonamukhi ,,	21,283 12,616			Ditto		120	December.	furnis 1 747	hed.	"
	24	Bankura R.C.	108,804 17 3, 607	34 h		Ditto Ditto		75	August and October to December. October February, October, and	760	20 10	
3ankura≺	25 26	Gangajalghati ,,	119,321	Makenes mer	"	Ditto November	•••	66	December.	759 845	15 6	
	27 28	Raipore ,,	90,122 95,802	November		December Ditto	•••	18 24	November and December. Ditto	679 288	3	
	29 30	Simlapal ,	32,682 119,595	Ditto January	:::{	Ditto		64	January, March and April.	494	20	
	31 32 83	Sonamukhi . ,, Indus ,, Kotalpur ,	67.400 78,809 91,964	September January Ditto	:::	September Docember Ditto		1 20 49	Verry slight December November and Decem- ber.	288 463	1 4 13	
		District Total	1,041,752	January		December		488	December	5,617	107	5,
	84	Soori T.	7,848 118,891	July January	:::	Angust December	•••	40	July and August November	1 583	11	
	35 36 37	Bolour ,,	126,566 107,809	March Ditto	:::	Ditto Ditto Ditto	•••	10 103 265	Slight December November and Decem-	465 485 491	3 21 42	
Bir bh um•	1 38	Sakulipur,	122,723 87,774	April		Ditto	••• ···	35 74	ber.	901	12 25	
	40	Moureswar ,	133,897	1		Ditto Ditto		61	August, November and December. December		14	
	(41	District Total	704 400	-1 <i>.</i>	•••	December	•••	592	November and December.	3,199	129	3
	c 45	Midnaporo T.	33,560	January		December		1	ember and December.	1	1	
	4	1	12,638	1	···	Ditto June	•••		ber and December. January to March	. 1	1	"
	4	Ramjibanpore		March	::.	December Ditto		1 13		1,340	16	1
	4	Binporo »	90,70		••• •••	Ditto Ditto	•••		December March, July, August, and October to Decem	772 620		
Midnapore	3 1	Debra		Ditto	•••	Ditto Ditto	•••		March and November March and October to	. 779		
	5	Garbotta	135,78			Ditto	•••		December.	1	1	L
	1	3 Jhargram "	59,78	January	• • •	July December	, ••		May March, November and	. 607 i 905	10 34	
		1	180 10			Ditto	••	۱ ۵۰	December. January, February, July and October to December.	7, 1,017	70	1

1	2		3			4	5		6 •		7	8	9	10)
	tuary on the	<u> </u>				• _	holera		Date of last case of Cholera in the circle during the year.		lers in		each of	NUMBI THOS	
Districts.	Number of circles of mortuary registrations as shown on the	Names of Circles.		Population of the circles.	Date of first case of Cholera in the circle during the year.	Date of first case of in the circle during th			Total deaths from Cholers the circle during the year.	Preiod of Maximum Intersity of the Disease as Represented by Moetality.	Number of villages in the rural circles.	Affected by Cholera.	Not affected by Cholera,		
	55 5d	Salbo			B.C.	53,617 201,714	• February January	1886	December 18 Ditto	86	8 196	Very slight January, February,	492 745	8 66	484 679
	57 58	Ghati		•••		79,455 64,805	Ditto Ditto	:::	Ditto Ditto	:::	29 81	October and December. February and December January, February, August, September and	339 276	20	331 256
	51	Dasp	ır		**	115,269	Ditto		Ditto		177	November. January, March to May, November and and December.	406	64	342
	60	Taml	uk		,,	80,049	Ditto		Ditto	•••	168	October to December.	271	37	234
	6	Masi	ındpur	•••	**	80,569	Ditto	•••	Ditto		808 420	Ditto	252 274	85 51	167
	65	Nand	igram		,,	121,895	Ditto	•••	Ditto	"		January to March, July and October to Decem- ber.	2/4	1	223
Midnapore—	6	Pane	hkura	•••	97	142,081	Ditto	•••	Ditto		180	January, February and October to December.	648	63 39	585
concld.	6	1		•••	••	51,624	Ditto		Ditto Ditto		96 600	January to March and December. January to May, Nov.	247 740	171	208 569
	6	(Cont	11	•	••	180,554	Ditto	•••		"		January to May, Nov- ember and Decem- ber.		l	
:	6	Egra	•••	•••	**	63,417	Ditto	•••	Ditto		127	January, February, April, August, November and December.	376	29	347
	l e	7 Pata	spur		••	87,824	Ditto		Ditto		156	August, November and	456	36	420
	6	Ragh	unathr	our	**	62,124	Ditto	•••	Ditto		505	January to May and Oc- tober to December.	395	105	290
	0	l	wanpu	r	••	96,451	Ditto	•••	Ditto		262	January and October to December.	382	70	312
	1 7	0 Kha	ri	•••	**	42,126	Ditto		Ditto		127	January, February, July, August, Nov- ember and December.	135	41	94
			Distric	t Toti	al .	2,515,565	January	•	December		4,632	January to April and October to December.	14,758	1,214	13,544
	ا ا	1 Hug	bli	••	т.	88,718	January		December		199	February to April and October to December.	101	45	56
		2 Jehn	mabad		. ,,	10,507	Ditto		Ditto		5	January, April and December.	1	1 24	16
		8 Bal	gore 		R.C	48,218 46,178	January			•••	105 36	October to December January, February and December.	1	ii	135 162
Hughli	1	75 Huj	thli			15,458	Ditto	•••	Ditto	•••	112	January, March, April November and Decem- ber.	49	9	40
			niakha dua	.li		امر,89 11,000		y	This.		18 29	August	184	7 8	379 176
	- 11	78 Jeh	nabad nakul			99,505 133,30	January Ditto		Ditto Ditto	:::	45 85	Slight	231	21 17	197 214
		gog Gog	hat	••	. ,,	111,18		•••			108	January, February, Oc ber and December.		14	199
		1	District	Total	••	. 663,050	January	•	December	•••	098	January, February April and October to December.	1,731	157	1,574
	t _j	83 Sera	mpore		T.	26,49	January	·	December		202	August, and October t	7	7	
	1	82 Boi	lobatty		. ,,	14,71	B Ditto		Ditto		85	December.	a 11	8	3
	11	88 Uti	erpara			5,81	0 Ditto		. Ditto	•••	20	and July to December	1	1	
Serampore	-1	1	mpore		R.C	1		**			30	ber and December.	- 23		1
		86 Ha	ripal ripal inditols			59,18 84,93	3 Ditto	••	. Ditto	***	134 62 215	January and December	855	21	834
		11	sp ns ko Sprinci		. ,,	84,38 85,10		••	Dista	•••	١,,	ber.	179		1
		-	District			351,95	- •		December	•••	710	January, April, an	d 924	110	814
							-					October to December			
	1	1.	wrah		T.	90,81	1	y .	1	•••	1		1	1	
		90 Ba	li .	••	97	14,8	March	•	Ditto	•••	1	March, August at October to December	. 1	9	* ·
il owrab	\parallel	91 Po	omjar .		R.	198,4	77 Januar	, .	Ditto	٩,,,	. 84	January to Marc August and October December.	h, 20		
	-		gathall	-		77,5		;	Ditto	••	1	9 January, November at December.			
	- U	93 U	luberia	,	4 35	81,3	45 Ditto		Ditto	**	i a	8 November and Decer	n- 86	3 5	1 81:

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	2	8	4	. 5	6	7	8	9	10	
,	rtality on the		_	Cholera in he year.	Cholera in the year.	lera in	,	each of	NUMBE THOSE	
Districts.	Number of circles of mortality registrations as shown on the	Names of Circles.	Population of the circles.	Date of first case of Cho the circle during the y	Date of last case of Chol the circle during the 3	Total deaths from Cholera the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPERSENTED BY MORTALITY.	Number of villages in e	Affected by Cholera,	Not affected by Cho- lera.
	94	Amta B.C.	109,968	January 1896	December 1886	63	September, October and December.	216	22	194
Howrah-	95 96	Bagnan ,,	63,56 3 69,861	Ditto	Ditto	127	March, May and Octo- ber to December. January to March, and October to December.	219 816	38	170 278
		District Total	635,381	January	December	1,404	January to April, and Saptember to Decem- ber.	1,496	293	1,213
,	97	Suburbs of Calcutta T.	251,439	January	December	1,845	January to December	98	72	26
	98	South Suburban "	51,658	Ditto	Ditto	122	January, February, April, and September	88	31	7
	99	Baranagore ,	29,982	Ditto	Ditto	228	to December. January, March to May, July, August and Octo- ber to December.	15	14	1
	100	Rajpore ,,	10,576	April	Ditto	4	April, August, November and December.	8	4	4
	101	Augurpara ,,	22,789	January	Ditto	76	l'ebruary, April, July, August and October to December.	16	15	1
	102	Nowabganj ,, Naihatti ,,	18,018 21,533	Ditto	Ditto	110	January, February, May and September to December, January, March, April	30	23	4 7
							and October to De-		1	-
	104	Bussirhat ,	20,450	Ditto	Ditto Ditto	42 61	January to April and December. January, April. Novem-	19	12	7 9
	106	Taligunge R.C.	47,798	Ditto	Ditto	44	January, April, November and December. January, November and	143	14	129
	107	Achipore "	62,536 71,717	Ditto Ditto	Ditto Ditto	68	December. October to December November and Decem-	178 2\0	26 33	152 217
	108	Bistopore ,	31,858	Ditto	Ditto	٠	ber. January to April, Nev-	162	20	142
	110	Bhangor *	78,852	Ditto	Ditto	243	January to April, Nov- ember and December.	817	60	257
a. 1)	ın	Barriepur ,,	75,830	Ditto	Ditto	145	January, February, May, November and December.	850	55	205
24-Pergunnaha	112	Joynagore »	76,140	Ditto	Ditto	1	January to May and De-	228	61	167
	113	Kanning ,	47,518 81,578	Ditto	Ditto	04	ember and December.	240	63	84
	114	Dum-Dum s. Barrackpore s.	21,660	March	Ditto		December.	63	5	54 58
	116	Naihatti ,	55,429	January	Ditto	107	November and Decem-	183	18	165
	117	Baraset	73,131 53,516	February	Ditto			282 154	26 23	256 131
	119	Habra	75,429	1	Ditto	000	January to May and De-	9.5%	40	212
	120	Bussirhat	55,887	Ditto	Ditto	. 128	December.	165	38	127
	121	Husnabad ,,	67,227	Ditto	1	1	ember and December.	176	43	133
	122	Baduria ,	104,606	1	Disse	700	December.		75 49	121 173
	123 124	Diamond Har- ,,	52,828	1	Ditto	114	October to December, January to March, November and Decem-	262	28	234
	125	Kulpi "	90,319	Ditto	. Ditto	86	January to May, November and December.	427	GO	858
	120	Debipur ,,	48,448	i		8	January, February and December.]	14	245
•	127	1	107,278	l .	Dista	s. 32 80	October to December.	1	69 57	315
	128		1,869,85	_		6,79	ber and December. 1 January to May and		1,094	4,364
	(12:			_		8	October to December. 7 February to May		1	.,,,,,,
	- 11	•	14.10	1.		١.	November and December.	-		
Nuddes .	. 18		1 064	5 Ditto 8 April	Ditto		2 April, November and Documber,	- 1	1	
	18	Santipore ,	l l	. 1	Ditto		november and December.	•	i	1
	Ü 18	S Kustia ,	9,71	7 January	Ditto	1	January, March to May August and December	, 1	1	

1	2	3	4	5	6	7	8	9	10)
	rtuary on the		• gi	Cholera to year.	of Cholera in g the year.	Cholera in he year.		each of	NUMBI	E-
i) istricts.	Number of circles of mortuary registration as shown on the Map.	Names of Circles.	Population of the circles.	Date of first case of Cholera in the circle during tho year.	Date of last case of Ch the circle during the 1	Total deaths from Ch the circle during the	PRRIOD OF MAXIMUM INTERSITY OF THE DISEASE AS ERPRESENTED BY MORTALITY.	Number of villages in the rural circles.	Affected by Cholera.	Not affected by Cho- lera.
	134	Meherpur T.	5,731	March 1886	December 1886	29	March, April, June, November and Decem-	1	1	•••••
	135	Kishnaghur R.C	77,887	Janusry	Ditto	498	her, March to May, November and December.	172	55	117
	136	Hanskbali "	45,340	Ditto	Ditto	305	January to March, November and Decem-	94	45	49
	137	Kissengunj ,	82,701	Ditto	Ditto	222	January, February, April, May, November and December.	48	34	14
	138	Chupra,	63,509	March	Ditto	396	March to May, Novem- ber and December.	109	46	68
	139	Nakashipara ,, Kaliganj ,,	59,762 54,192	January February	Ditto Ditto	, 79	April and December. March, April, November and December.	128 100	24 22	104 78
	141	Ranaghat ,	75,732	January	13/44.5	900	and December. January. February, April, May, November and December.	199	77	122
	142	Fantipore	24,177	Ditt	1	ı	January, May, November and December.	57	81	26 135
	143	Chogdah ,,	64,620	Ditte	1 .	110	March, April and Docember. January, March to May.	161 91	26	77
	144	Haringhatta ,,	38,306	Ditto		77	November and December.	22	14	8
Nudden— ceneld.	145	Kumerkhali ,	17,726 98,247	Ditto	Documbon	KUS	June. January to May and	246	88	158
	146	Doulstpur	74,178	Ditto	Ditto	471	January to June, Novem-	124	47	77
	148	Nowpara,	186,713	Ditto	Ditto	. 438	January to May, November and December.	220	75	145
	140	Bhaluka ,	41,929	Ditto	. Ditto	. 92	January to June, November and December.	l	32	79
	150	Bhadulia ,,	68,184	Ditto		. 102	and December.	137	39	24
	151	Chuadanga,	21,818	1	T1244-	. 249	and December.	37 150	51	99
	162	Alamdanga ,	89,947	Ditto	TO:44	000	cember.	113	63	50
	153	Damurhudda ,, Kalupol ,,	63,014 89,396		D:44.	144	ber and December. January, February, May November and Decem-	1	7	63
	155	Jibannagar ,	40,120	Ditto .	Ditto	817	ber. January to May, Novem and December.	- 77	86	41
	156	Meherpur ,,	P. 556	March	Ditto	483	March to June, Novem- Ler and December.	112	63	4
	157	Tehatta ,,	84,160	1	· 1	238	ber and December.	140	52	8
	158	}	102,754	_	l l	362	and December.	201 142	50 42	100
	159	as a tak Makal	1,655,721	-{_	Daniel an	7,008	January to May, Novem		1,048	2,02
			1,000,721	-			ber and December.		7	
	160	la	8,495	í	Titte	25	ber and December.	1	131	28
	161	1	63,902		Ditto	187	December. January to April	1	28	16
	163		155,611	Ditto	Ditto	. 191	April.	1	39	130
	164	1	67,420	1	Ditto	379	December,	1	43	18
	165	1	89,202 85,450	1	Ditto	. 19	December.	. 152	6	14
	106 107 168	Jhenida ,.	102,027 44,038	Ditto	Ditto	545 816		- 296 - 93	64 43	28
	169	1	138,305	1	Ditto	877	February to May and December.	315	82	23
Joseph	170	Harinakundo ,,	41,805	Ditto	Ditto	80		120	14	10
	171	Magoora ,,	150,162	Ditto	. Ditto	1,090	ber. January, March to June November and Decem-	1	187	20
	174	Salikha ,,	50,464	Ditto	Ditto	. 280	ber. January, April, May and December.	132	49	8
`	173	1	83,677	1	Ditto	546	January to May and December.	297	88	21
	174	Narail,	151,362	Ditto	. Ditto	1	January, April "and	889	219	27
-	175	Kulin,	72,947	1	1	227	January to March and December.	146	76	22
	176	1_ "	103,869		1	. 120	December.	267	38	11
	177		50,448 50,223		Ditto	130				10

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	2	3	4	5	6		7	8	9	10)
	northary		les.	f Cholera	Cholera in he year.		holera in		in each of	Numbe	к -
Districts.	Number of circles of mortilary	NAMES OF CIRCLES.	Population of the circles.	first case o ircle during	of last case of Ch circle during the	٠	de the from Cholem circle during the year.	PERIOD OF MAXIMUM INTERSITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	rillages rireles.	Affected by Cholera.	affected by Cho-
	Number		Popula	Date of in the c	Date		Total tue ci	•	Number of the ro-al	Affecte	Not a
lessore — {	179	Garespota R.C.	61,052	January 1886	December 188		860 781	January to Muy and December. Intto, ditto	124 213	29 94	95 123
concld.	180 181	Mohespore ,, Sarsha ,, District Total	112,137 79,046 1,939,375	Ditto Ditto	April Decomber	:::	849 7,891	January to May and	1 15	1,220	8,512
		District Touti		• amary	Decomber	"	7,001	December.			
ſ	183	Berhampore T.	23,605	January	1		153	July, November and December.	1	1	
	183	Kandı ,	10,661 89,231	March February	Ditto December		18 125	March, August, November and December. April to Angust and Oc-	1	1	
	185	bad. Jungipur,	10,187	January	November		24	tober to December. January, March to Sep-	1	1	
i	186	Burwa R.C.	67,912	April Ditto	December Ditto		26 86	tember and November. December April, May, November	157 213	23	13 18
ļ	187	Doulathazar ,	108,508 39,568	Ditto	Ditte		17	and December.	115	8	10
	139 190	Sujaranj Gorabazar	8,345 12,638	December		:::	28	July, November and December.	46	5	4
	191 192	Goas Hardarpara	78,423 57,135	September March	Ditto Ditto		28 163	December March, April, November	122	7 31	25
	193	Nowada ,,	47,559	Ditto	11/440		195	and December. March to May and	81	25	t
Murshidabad:	194	Kandı ,,	79,659	January	Ditto	•••	181	December, January, February, June to Ecptember, November and December.	302	51	2:
	195 196	Gokuru ,, Bharatpur	42,446 108,025	April March	Ditto Ditto	•	57 167	October to December March to May, Novem-	109 231	20 41	1
	197	Khargaon ,	54,018	November	Ditto	•••	101	her and December, November and Decem-	122	17	1
	198	Assanpur ,,	11,177	April	Ditto	•••	22	ber. April, July, October and November.	122	12	1
	199 200	Bhagwangolla ,, Kaliangani ,	57,238 37,206	Ditto July	Director	•••	62 65	April and May November and Decem-	261 197	17 21	2 1
	291	Shahanagar ,,	9,523	April	Ditto	•••	3	her. April, May and December.	170	18	1
	202 203	Manullabazar ,, Sagardichi ,,	1,979 27,859	Ditto			. 86 86	April November	69 149	1 4	1
	201 203	Roghunathganj ,	57,269 55,036	Ditto		•••	87 35	May and November	145 229	14 11	1 2
	200	Shamsherganj	69,586 66,556	April May	Ditto August	•••	26 10	May	184	13 2	2
	208	District Total	45,496 1,226,790	November . January .	Dugombon	•••	1 794	November and December. April, May, November and December.	3,697	377	3,8
	209	Khulna T.	6,178	January	. December	•••	49	January, February, April and September to	1	1	
	210	Batkhira	8,735	Ditto	May		7	December. January and March to	ł	4	
	211			Ditto	Doggan	•••	974	May. January to April and	222	48] ,
	21:	Damura ,,	109,020	Ditto .	Ditto	•••	200	December. January to May and December.	294	41	1
	213	Baitaghata ,	37,501	Ditto .	. Ditto		171	January to March, November and Decem-	129	55	
	21	Parkgacha ,	70.478	Ditto .	Ditto		96	January to April and December.	240	35	,
kihulna	21	Ragirhat ,,	137,818	Ditto .	1		į	January, March, April, July and December.	317	57	1
	21		50,478	Ditto .	Ditto	•••	. 55	January, February and December. January to April and	ł	31	
	21		49,827 62,670	Ditto .	Ditto	•••	34	November.	203	22	
	71	Satklura ,,	87.870	Ditto .	Ditto		128	January to April and December. Ditto ditto.	193	21 34	;
	22	Magura	81,398 48,212 62,412	April .	Ditto April October	•••	N1	Very slight January and March to	122	2 21	
	22	.	146,130		December	•••	994	May.	ł.	56	
			1,079,948	January .	December	•••	1,727	-) ber.		441	2,
	c 22	Dicajpur T. Dicajpur R.(. 12,560	1	Decomber		i i	1 .		*1	
	,,		: 1 5		. Ditto		84	(April	731	13	1 :
Dinajpur	22	Rajaramporo ,,	199,826	1	Ditto	٠	.ما	D comber	. 441	6	

App. II.]

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886 - continued.

					, 	6	<u>-</u>	7	8	9	10	4
1	2				1-	•	-¦-	'- .= .		8	NUMBER	
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first case of Cholera in the circle during the year.		Date of last case of Cholera in the circle during the year.		nolera te year.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPRESENTED BY MONTALITY.	Number of villages in each the rural circles.		Not affected by Cho-
	229 230 231 232 233 234	Pirganj	93,880 85,287 61,637 94,882 81,877 69,238	January 1886 . Ditto April January Ditto		December April June Ditto		10 19 1 82 14 	Very slight January January Ditto Slight	852 329 468 482 620 513 430 305	4 4 1 0 6	348 325 407 476 614 513 427 305
Dinajpur— concld.	235 236 237	Mohadebpore Parsha Patiram	67,265 48,586 70,661 74,491	January		December		 61 87	January, June and December, January and November.	684 443 381	12 10	676 431 871
	239 239	Gungarampore ,, Chintamon	52,058	Ditto		Duto January		42	March, April and Decomber. January	215	1	214
	240	Parbatipur ,, District Total	1,514,346	1_	···	December		633	December	6,921		6,803
	[241	Beauleah T.	19,791	'	•••	December May		52 21	April. May, July and December. April	Not sep ed. 422 395	arately for	ariush- 387 390
	242 243 244	Beauleah R.C. Tanor Godagari	85,600 43,799	April Ditto		April June Ditto		8 4 83	Very slight	832 295 307	1 18 25	831 277 282
	245 246 247	Pu u	121,238 124,160 121,581 153,662	January February		December July December	:::	4 <u>4</u> 25 101	April	461 405 576	7 32 63	454 373 514
Rajshahye .	248 249 250	Nattore Singra Burigram	112,607 121,554	April		Ditto Ditto Ditto		179 181 6 167	April and May April, May and December Ditto	356 248 346	3 t 21 20	322 227 326
	251 252 253	Naugaon	84,962 85,840 103,308 79,431	Ditto	==	Ditto June December		87 50 99	January, April to June and December. February and June January, April, May	625 391	7 42	618 349
	į 254	Panchpur ,. District Total	1 224 000	-		December		1,049	and December. April, May and December	5,159	300	4,850
	255		10 000	April		December	•••	12	April, June, August and December.]	1 90	
	956 257	Maiganj R.				Ditto Ditto	•••	546 284	April to December March to May and Sep- tomber.	728 386	13	699 362
	258		124,507			Ditto	•••	108 62	May, August and Sep- tember. April. May, November	327 139	17	314 122
	259		88,619 99,053	1		Ditto Ditto		90	and December.	431	20	451
	26	l Pirganj "	69,008 138,76	Ditto		Ditto November		16	May and December September to November	T T.	15 28 14	390 44 120
Rungpore	,,, { 26 26 26 26	3 Jaldaka	163,6 143,5 142,5 177,2	Ditto	:: ::	December Ditto Ditto Ditto	•••	188 80 166 856	July and December	770 564	20 92	171 750 472
	26		215,218	January		Ditto		920 430	January, May, July and So	1,052	80	972 833
	26		189,027 57,805	November		Ditto Ditto		7.47	November & December	349	35 41	45 803
	26 27 27	0 Smiullapur "	112,568 91,468	January		Ditto Duto		1 000	May to July and Sep- tember to December.		604	154
		District Total	2,097,90	January		December	•••	6,127	April to June and So- ptember to Decomber.	6,737		6,133
	(27		6,179 C. 216,759		•••	April December		.] 117	April, May and July	970 284	23 17	956 26
	27	4 Sherpur 5 Sherakandi ,.	47,46	3 April 8 January		December	••	47	October to December May, June and August	453	8	36 30 43
Bogra	2	6 Khetlal	59,08 94.53	0 May 4 January	•••	December Ditto	••	11	January. April and May Very slight	617	41	57 55 82
	21	79 Panchbibi 80 Nawabgungo	39,37	4 May		Tuno			May		1	23
		District Total		January		December		. 90		4 940	189	4,04
	} =	82 Pubna	г. 15,26	 57 March	•••	December	•	10	cember.	٠- ١		
	- 11	83 Serajgunge	21,00	37 January	•••	Ditto	•	··	January, March, Apri November and Decen ber.	i-		
Palam		Pubna R	.0. 174,8	81 April		1 _		1 1 9	ber. April, May and Decen ber. January and March	1	1 .	8
	- :	285 Dulai		1	ï	Dogambar		1,2	May. March to May and D		ì	3
	(. ;	286 Chatmohar	, 133,4	07 Ditto		Denomina			cember.			

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	1	2	3		4		Ī	6		7	8	9	10)
	tuary	on the				f Cholera the year.		lera in		lera in	•	cach of	NUMBE THOS	
Districts.	Vembor of oreolog of mon	registration as shown on the Map.	NAMES OF	CIRCLES.	Population of the circles.	Date of first case of C in the circle during th		Date of last case of Cholera the circle during the year.		Total deaths from Cholera the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPRESENTED BY MOTALITY.	Number of villages in the rural circles.	Affected by Cholera.	Not aff-cted by Cholera.
		287 288 289	Mathura Serajgungo Shazadpore	R.C.	102,486 198,118 216,494	January .		December 188 Ditto Ditto	в' 	292 155 283	March to May April and December April, May and Decem-	276 445 572	53 51 75	223 434 457
Pubna-concid.	1	290	Ulapara	»	171,711	•		Ditto		152	ber. January, March, April and December.	650	39	512
	ij	291	Raiganj	,,	92,374			Ditto	••:	88	April and December	529	28	500
	1		District	Total	1,811.723	January .	••	December	***	3,235	March to May and De- cember.	3,964	618	3,336
		292	Darjiling	T.	7.976	June		June		3	June	1 89	1	
Darjiling	{	293	Darjiling Kalimpong Kurseong	R.C.	45,300 12,653	July		August Ditto		157	August	32 84	16	80 68
	Ų	295 296	Phansidewa	••• ,,	26,937 63,241	*4		December		63	May, July and August	787	12	725
			District	Total	156,137	March	•••	December		231	May to August	913		918
		297 298	Julpaiguri Julpaiguri	T. R.C.	7,947 67,171	1 1	 	October December	:::	3 45	June, July and October July and December	1 61	1 6	55
	'	299 300	Silliguri Boda	,,	• 178,643	Ditto	::	Ditto Ditto	:::	142 81	July to December November and Decem- ber.	240 484	31 20	216 461
	11	301	Pateram	,,	64,636	February .		Ditto		22	September and November,	29	6	22
Julpanguri	11	302 303	Mynaguri Kairanti	;;	66,451 82,488			Ditto	::: }	177 112	October to December July, August and October	43 68	21 15	22 53
		304	Alipore	,,	82,086	35		Ditto		63	to December. July, October and Nov-	81	10	71
		305	Salbarı		51,697			Ditto		655	ember. August to December	64	30	34
	į		District	Total	541,562	February		December	•••	1,330	October to December	1,110	143	267
	(306	Dacen	Т.	80.161	January	 .	Decembor		156	April, September, Nov- ember and December,	199	93	100
	1	307	Naramganj	,,	12,561	Ditto	•••	Ditto		121	January, March to May, August, September and	25	15	10
(H	900	Lalbagh	R.C.	161,287	Ditto		Ditto		984	January April Novem-	474	319	15
	11	308	Kapasia	,,	119,515	Ditto		Ditto		119	January, April, May and	460	27	43
		310	Sabhar	,,	174,531	Ditto		Ditto		305	January, February, April and December.	504	98	-10
		311	Nowabganj	••• ,,	160,235	Ditto		Ditto		682		300	111	18
Dacea	. []	312	Naramganj	*** **	91,199	Ditto	•••	Ditto		163	March, April and Dec-	i	59	63
		313	Raipura	,,	202,738	Ditto		Ditto	•••	253	January, March to May and December.	1	1	48
	- [1	314	Rupgunge	,,	164,159	Ditto	•••	Ditto	•••	590	January, March to July and December.	}	i	51
	;	315	Moonshigun		243,463	Ditto	•••	Ditto	•••	753 1,186	January, April, May and December. January, November and	Ì		13
	1;	316	Manakana	,	275,984	Ditto	•••	Ditto		253	December. January, April and Dec-	i	72	34
	1	317	Jafferganj		181,196 143,012	Ditto	•••	Ditto	•••	271	January, March to May	l	109	37
	Į	310	Harirampor		100,000	February		Ditto		456	and December. Maren to May, November and December.	239	91	14
			Distric	t Total	2,116,850	January		December		6,882	January, March to May, November and Decem-	5,770	1,719	4,05
	(320	Faridpore	T.	10,263	February		May	•••	1 41138		1 195	1	,
	İ	321 322	Faridpore	R.C.	81,288 107,415	March January								11
		323	Awanpur	11	100,257	Ditto		Ditto		233	January and March to	3	30	18
>	!	324	Maksudpur	· ••• ••	156,933	Ditto		i	•		March, April and Dec-	1	46	26
		325	Bhanga	*** **	164,389	Ditto	•••	Ditto	•••	ı	and December.	1	1	25
Faridpore .	_]	320		,,	165,917	Ditto	•••	Ditto	•••		December.	1	183	54 34
· · · · · · · · · · · · · · · · · · ·		327	Polong	,.	256,250	1 .		Ditto	•••	on	December. January and December	132	183	11
	1	328 329		*** **	85,341 116,043	Ditto	•••	Ditto	•••	140	April, May and December.	194	41	is
		330	Kotalipara	,,	66,153	Ditto	•…	Ditto	. •••	. •	January to May and December.		50	19
	i	331	Goalundo	,,	106,050	i .	••	Ditto	•••		December.		116	17
	l	332 338		,,	150,366 65,068		•	Tanana	•••			1	59 120	22 15
	Ì		1	et Total	. 1,631,734	Jnusary	•••	December		7,395	January, March to June and December.	3,892	987	2,90
								1		1	Bill December.	1	1	

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	2	3	4	5	6	7	8	9	10	
	the			f.	.E.	E		8	NUMBI	
Districts.	Number of circles of mormary registrations as shown on the	NAMES OF CIRCLES.	Population of the circles.	Date of first cave of Cholers, the circle during the year.	Date of last case of Cholers the circle during the year.	Total deaths from Cholera the circle during the Jear.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REFERENTED BY MORTALITY.	Number of villages in each the rural circles.	Affected by Cholers.	Not affected by Cholera.
	331	Barrisal T.	13,186	March 1886	December 1896	40	March to May and Dec-	1	1	******
	335	Thelekati	113,733 143,416	January Ditto			ember. April and May January to May and	206 842	52 67	244 275
	337	Nalchiti ,,	78,961	February	Ditto	70	December. March to May and Dec-	239	28	211
	331	Marthumai	135,396	January Ditto			ember. January, April and May January to June and	238 381	52 90	186
1	340		184,192	Ditto	T).tte	200	December. January to May and	485	171	291 314
Backergunge	341	Perozepore ,,	117,638	Ditto	Ditto	1	December. December March to May	242 187	80	162
Intertal Rango	34		96,032 160,284	March January	The man bear	077	March to May and Dec- ember.	448	92 113	95 835
	314		73,352	Ditto	ļ	1	January to May and December.	68	40	25
	343		173,801 95,188	Ditto	Men		January and March to June, April and May	302 186	70 30	232 156
	347	Gulshakhali,	98,732	Ditto	. December	370	January to May and December.	309	82	227
	349 840		59,037 123,160	Ditto Ditto			April, July and December.	204 201	16 52	188 149
	850	Barhanuddi ,,	89,061	Ditto	Ditto	186	January to April and December.	207	87	170
		District Total	4,900,880	January	. December	3,027	January, March to May and December.	4,336	1,073	8,263
	j 35	Jamalpore T.	16,091	April	December	21	April, November and	68	21	47
	35:		12,898 18,124	January February	Ditto		December. January to May March to June, August,	49 25	20 10	29 15
	1						November and December.			
	35	- laboranous	282,846 220,452	January Ditto	Title	079	January, March, May and June. January to May and	1,213	75 208	1,138
	35	Gaffergaon	117,759	Ditto	. Ditto	134	December. January, March to May	460	69	982 891
	35 35 35	7 Phulpur 8 Netrokona,	114,467 471,658	Ditto Ditto	October	1,477	January to July January to May January to June	790 3,203	36 174	754 3,029
Mymensing	36	janulpore ",	116,457 193,238	Ditto	1 23.	172	January, November and December.	914 717	89 85	875 682
	36		187.	im	ı	1	May to July, No vo ber and December.	1,016	96	920
	36	9 Kichoromani	101,572	Ditto	Ditto	200	January, November and December, January to May	267 589	48	219
	36	Bazitpore "	269,258	Ditto	. Ditto	948	January to May andDecember.	667	112	539 555
	86 86		122,459 442,119	Ditto ::			January to May January and March to May.	496 1,528	88 185	413 1,883
	36		217,736	Ditto	1	335	January, April to June and December.	1,171	49	1,122
	36	District Matel	76,262 3,051,966	January	Doggamation	7.171	January to June January to June and	14,676	00	252
		1	3,001,000	January			December.		1,326	13,350
	36 37 37	Chutagorg R. C.	22,130 53,022	January			Slight	1 25 124	1	25
	37	2 Mirarui	144,380 76,790 58,611		*******		********	124 110		124 124 110
Chittagong	37	5 Satkannye ,	101,768 147,515	August April	. Angust	1 4	Very slight	128 195	1	127 194
	37 37 37	7 Putteah	104,500 180,448 1 81,830	June	June	5	Do	105 221 63	1	104 221 63
	37	9 Cox's Bazar 6 Maskal	62,817 29,158					79 27		79 27
	1 3H		88,825 30,548	*****	*************		••••••	54 107		54 107
		District Total	1,132,341	January .	. August	13	Very slight	1,863	4	1,359
•	38 1 38 37	4 Sudharam R.C.			. Ditto	. !!	January and December	5 428 900	3 8	2 428
Wankh II	30	6 Ramgan	113,321 80,742 128,938	Ditto Ditto	Ditto	. 129	January to May January, October and	382 430 510	14 55 43	368 375 467
Noakhallı		Bampi	41,731	March .	March	. 2	December. Very slight	46	1	45
	3	Hattia	72,467 40,295 132,697	January March			Do	82 89 418	81 ₅	51 89 408
		Chagalnia ,	109,278	February .	May .	· 9	. Do	245	2	243
	ļ	District Total .	820,772	January .	December	. 352	December	2,628	157	2,471

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	2	8	4	5	6	7	8	9		10
Districts.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles,	Date of first case of Cholers in the circle during the year.	Date of last case of Cholera in the circle during the year,	Total deaths from Chelera in the circle during the year.	PREIOD OF MAXIMUM INTERSITY OF THE DISMASE AS BEFFREENTED BY MORTALITY.	Number of villages in each of the rural circles.		Not affected by Cho-
, (393	Comillah T.	13,506	January 1886	December 1886 .	85	January, March, April and December. January to April	2 2	17 17	5
*	394 395	Brahmanberiah Comillah R.C.	17,543 125,879	Ditto	Ditto	435	January and March to May. January, April, May,	686 550	116 42	570 508
	396	Chandina ,,	78,521	Ditto	Ditto	. 140	November and December.	1		
i	397	Daudkandi ,,	143,222	Ditto	Ditto	904	January to May and De- ceaber.	659	137 65	523 480
	398	Maradnagar ,,	152,322	Ditto	Ditto Ditto		January to April and December. April and May	545 638	18	620
Tippersb	399 400	Jogonnathdighi ,, Laksham ,	86,872	Ditto	Ditto		January, April, May and December.	654	29	025
ł	401	Brahmanberiah "	223,751	Ditto	Ditto	ľ	January to May and December.	595	125	470
į	402	Kasba ,,	114,152	Ditto	Ditto	ı	March, April and December. January to May and	424 362	46 72	378 290
į	403	Nabinagar ,	175,971 112,034	Ditto	Ditto	190	December. January, April, May and	870	60	310
	404	Chanopur ,,	472,847	Ditto	Ditto	204	January to April and	954	62	902
l		District Total	1,519,338	January	December		January to May and December.	6,479	796	5,683
{	406 407 408	Patna T. Behar y Dinapore y	160,287 48,971 52,225	January March February	December November December	. 28	June to December July and August August and November	1 65 33	1 16 20	 49 13
i	409	Barrh R.C.	23,610 27,674	May Ditto	November Ditto	. 86	May, July to November June and July		soparat	
i	411	Bankipur ,,	97,001	Ditto	December Ditto) 1944	June to November June to December	360 671	urnished 80 86	1. 330 585
1	412	Bikram ,, Mossoudhi,	180,362 120,613 15,387	June September	Ditto	. 228	July to December September to December	618 90	37 8	579 87
Patna	414 415 416	Dinapore ,, Maner ,, Barrh ,,	98,516 170,589	June	Ditto	180	June	276 671	29 16	247 555
◀	417	Mokameh ,	93,824 88,031	April June	Ditto Ditto	91 92	June to August	160 811	6 12	164 299 759
·	419 420	Behar ,	233,312 91,477	February	November September	. 7	July and October Very slight August to November	775 841 425	16 5 19	830 406
	421 422	Attasarai ,,	78,932 176,078	March June	December Ditto		June to August and October.	920	44	876
		District Total	1,756,856	January	December	3,205	June to December	5,619	344	5,275
{	4:3	Gyв т	76,121	January	December	1	March, April, June to November.	1	1	
	424 425	DaudnagarR. C.	9,870 215,392	May	November	. 608		668 700	1 69 23	599
	426	Sherghati ,.	162,319 78,516	January July	November Ditto	40	July, August, October and November. August, October and No-	769 362	6	356
!	427	Attri ,, Tikari ,,	176,805	Мау	December	. 772	August to December	421	71	350
Gya	429 480	Barachati ,,	96,211 245,429	July	November November	. 792	October and November August to December July, August and No-	599 837 267	18 90 12	581 747 255
	451	Daudnagar ,	92,298 98,046	July June	_Ditto		vember. October and November July to December	400	13	486
	432 433 434	Jahanabad ,	274,754 310,435	July	December Ditto	1,035	August to November	595 230	268 26	827 204
	435 436	Nawada	391,713 96,775	Ditto May	Ditto November		October and November August to October	980 302	17 10	063 292
		District Total	2,124,682	January	December	4,729	July to Novembor	6,531	625	5,906
1	 437	Arrah T	43,465	Миу	November		September and October July to December	11 1	6	5
_ i	438 439	Buxar	17,668 17,835	June Ditto	December November	. 67	August to November	1 405	1 81	414
>	440 441	Arrah R. C. Belauti	291,437 195,879	July	November	378	July to September and	301	20	272
Mhaha ka J	442 448	Piru ,, Buxar ,	179,492 145,587	August	December	235	August to December August to November July to November	535 416	68 25	467 391 898
Shahabad	444	Domraon ,, Sasseram ,,	242,103 155,760	July January	Ditto	129	October and November August to November	434 642 428	42 15 17	892 627 411
	446	Khaghar ,	104,647 179,916	August September February	December	918	October to December September to December	405 256	31 21	464 235
	448	Dehree	78,884 171,823 150,413	April Ditto	Ditto November Ditto	179	August to October June to November	821 584	17 35	804 549
,	450	Mohania ,, District Total	1,964,909	January	December	4340	July to December	5,420	889	5,031
4	451	Mozusserpore T	42,742	May	December Ditto		July to December September and Decem-	1 1	1 1	*****
Mosufferpore	452	Sitamarhi ,.	6,125 25,6 95	February	Ditto	100	ber. June to December	1	1	
•	438	Hajipur ,,	000,000		· · · · · · · · · · · · · · · · · · ·	1	1	1 1		<u> </u>

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Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during
the year 1886—continued.

1	2	3	4	5	6	7	8	9)	10
DISTRICTS.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the cireles.	Date of first case of Cholera in the circle during the year.	Date of last case of Cholers in the circle during the year.	Total deaths from Cholera n the circle during the year,	PREIOD OF MAXIMUM INTERSITY OF THE DISEASE AS REPRESENTED BY MORTALITY.	Number of villages in each of the rural circles.	Affected by Cholera.	
Mozufferpore—	454 455 456 457 458 469 460 461 462 463	Lalganj T Mozufferpore R. C. Paru	16,783 , 500,596 288,157 187,340 463,137 222,516 146,116 244,530 310,444 127,079	August 1886 May April November July November May June July	December 1886 Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	16 248 153 54 230 222 97 154 817	September, November and December. October to December November and December December July, August and October to December, November and December. July, October and November. August and October to December, July and September to December.	1,117 540 214 567 212 192 723 688 816	1 56 82 11 27 13 8 84 56	1,081- 514- 203 540- 199- 189- 632- 259-
Durbhanga {	46 s 465 466 467 468 469 470 471 472 473	District Total Durbhanga T Durbhanga R. C. Roshera , Baltera , Tajnore , Tajnore , Nagarbasti , Madhubani , Khajauli , Bennpati , Phulparas ,	2,582,060 66,086 337,423 256,405 300,875 306,493 279,504 169,946 211,772 161,546 273,742 270,451	January Joly October Ditto July August Ditto January May Dutto January January January	December December Ditto Ditto November Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	2,118 37 140 61 122 219 70 106 196 173 240 486	October to December November and December November and December September to November December and December June, August, November and December, May to July July and October to December. June, July and October to December. June, July and October to December. June, July and October to December. June, November and	4,679 1 879 627 763 463 397 313 650 520 765 982	293 1 12 4 16 15 18 18 23 18 169 34	867 623 737 449 379 297 627 516 596
Sarun {	475 476 477 478 470 480 481 482 483 484 485	Chupa T Sewan R. C. Manjil Mashrak V Parsa Dighwara Sewan Durauli Dasantpur Gopalgungo Gopalgungo Baragaon District Total	53,240 13,307 12,403 100,205 144,722 220,802 230,072 120,231 302,041 222,618 211 176 260,047 554,55	June May June July June April September February June April May May Ditto	December Ditto Ditto Ditto Ditto Ditto November Ditto Ditto November Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	92 47 72 218 432 140 252 81 125 821 125 68 42 2,024	Discember. July to December August to November June to December July to November Unly to November September to December September and November July August to December september. November and December. November Stight July to December	14 8 7 7 507 233 270 523 178 573 562 390 469 859	14 1 6 6 6 41 27 43 15 21 38 17	2 2 3 4/2 1 1/2 2 4 3 4 6 0 1 6 3 5 5 2 5 1 4 5 7 8 4 6 2 6 5 3 4 ,287
Chumparun{	488 480 490 491 492 493 495 496 497	Bettiah T. Bettiah R.C. Bogana Lauria Motibari 'Motibari 'P. Clevindgari 'P. Diaka 'P. Kasariya 'Adapur 'Madhuban 'P. District Total	140,900	November July October June June Ditto September September June	November December November Dicto Ditto November December Ditto November December December December	1 540 10 86 7 42 126 78 24 84	Very slight August to October November October to December Very slight September and October October to December November Slight November and December, August, September and	1 1,684 655 892 892 736 777 1,052 522 615	1 28 2 7 1 7 8 7 2 5	1,456 053 825 891 729 769 1,045 529 610
Monghy	507	Monshyr T. Jamalpore Shekpara Monghyr R.C. Jamalpore " Gogri " Kharakpur Surajgan " Burajgan " Burajgan " Burajgan " Burayan " Jestra " Shekbura " Shekendra " Jamu" " Chakai "	57,520 13,563 12,517 81,786 6,261 365,954 143,0%) 166,243 879,794 203,632 186,243 120,563 100,540	June March October November Ditto October July May October January August Ditto March January	December Ditto November Ditto Ditto Ditto Ditto Ditto Ditto Ditto Diccember Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober Dictober	83 20 35 30 111 5 84 135 83 56 43 74	November, September to November October and November November and December, November and December, October and November October and November October to December October to December October and November Very slight August and October October	63 12 1 206 6 348 317 279 508 247 359 501 901	63 ⁴ 7	5 1 100 5 832 849 929 8 8,80
Bhagulpore {	512 513 614 515 516 517	Bhagulpore T. Bhagulpore R.C. Kumerganj, R.C. Kumerganj, Sikolong, Sibipur	57,453 100,379 98,427 192,237 98,403 299,042	January February September Ditto August January	December Ditto Ditto Ditto Ditto	263 41 18 53 14 446	October to December October November lig August June, July and October to December.	61 871 210 869 66 317	44 12 10 11 1 42	1 85 90 35 6 27

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

1	2	3	4	6 *	6	7	8	9		10
	es of mortuary shown on the		e circles.	case of Cholers during the year.	of Cholera in	om Cholera in R the year,	PERIOD OF MAXIMUM	res in each of	тно	SE OF
DISTRICTS.	Number of circles of mortuary registration as shown on the Map.	NAMES OF CIRCLES.	Population of the circles.	Date of first on in the circle du	Date of last case of Cholers in the circle during the year,	Total deaths from Cholers the circle dunng the year,	INTENSITY OF THE DISEASE AS EEPIRESENTED BY MORTALITY,	Number of villages the rural circles,	Affected by Cholera.	Not affected by lera.
Hagulpore - {	518 519 520 521 622 528 524	Pertabganj B.C. Bongong, Madehpur Kissenganj, Banka, Amurpore, Katuria,	153,272 144,560 262,678 135,328 134,227 208,568 77,644	April 1886 Ditto May January April April	November 1886 Decomber June December April November April		Slight	186 379 165 208 295 570 95	4 7 1 3 2 18 2	1 42 372 1 64 295 297 552
-,		District Total	1,966,158	January	December	1,070	October to December	3,382	157	3,225
	525 526 527 528 529	Purnoah T. Purnoah B.C. Kusba Amour Dhamdaha , Gondwarah ,	15,016 138,704 124,889 109,391 123,946	July November Soptember April October	December Ditto Ditto Ditto Ditto	11 15 60 136 75	December	1 267 364 169 144	1 2 11 10 9	206 359 158 135
	530	Arrariah ,, Maliary ,,	200,012 94,115	January	Ditto	1,133 194	March to June, November and December, May, November and	334 204	196	138
Purneah	533 534	Raniganj ,, Kissenganj ,, Bahadurganj ,,	107,559 158,100 196,142	Ditto June May	May December Ditto	46 330 178	December. April and May October to December July and September to December,	120 281 371	11 4 26 141	193 122 235 236
-	535 536 587	Kaliaganj ,, Kadwa ,, Balarampore ,,	277,059 134,275 115,031	January November Ditto	Ditto Ditto Ditto	244 27 22	November and December. December	562 309 363	55 4. 5	50° 30° 85
`	538	Manihury ,, District Total	1,848,687	January	November December	2,486	April, May and October to December.	132 8,625	477	3,14
Inhinit	539 540 541 542 548 544 545 546 547 548	English Bazar T. English Bazar R.C. Maddah , Gajol , Ratna , Kharba , Kharba , Kharba , Kharba , Nawabganj , District Total	12,430 72,615 50,894 54,317 80,024 103,651 52,810 115,002 102,162 66,453	December Ditto January March January Ditto Mitto Ditto Ditto Ditto Ditto January January January January January	December Ditto May December March December December December December December December July December Dec	14 1 26 1 9	Very slight Do Do Do Do. January and December January Very sight Very slight Very slight Very slight Page 3 Way Page 3 December Very slight	51 213 836 586 589 541 249 280 237 235	1 2 6 2 23 0 1 12 13	8 21 33 54 37 68 24 26 28
Sonthal Pergrunnahs.	549 550 551 552 553 554	Deoghur T. Dumka R.C. Rajumhal, Pakour, Leoghur, Godda,	8,005 863,186 254,825 204,919 889,665 349,493 1,568,003	March November A pril March June	November December December November December	46 88 3 37 106 22	March, April and August to November. Slight Voty slight Do. October	2,909 1,326 1,251 4,609 1,768	1 4 8 18 81 4	1,75
ĺ	555 556	Cuttack T. Kendrapara ,	43,239	January Ditto	December Ditto	50	June to August and November, January to June, Nov-	11,254	1	11,19
	557 558	Jajpur ,. Cuttack R. C.	11,233 155,335	Ditto	November December	42 425	ember and December. January and March to August. January to March, July and September to Do.	1 1 401	1 1 122	369
*	559	Bankı ,,	56,900	February	Ditto	34	cember. July, October and Nov- ember.	141	11	130
Cuttack ,,,	560 561	Salipur ,, Juggutsingpur ,,	249,979 215,001	January Ditto	Ditto Ditto	611 260	February and July to December. July to September, November and Decem-	780 1,057	126 60	65: 907
*	562	Tirtola ,,	188,677	Ditto	Ditto	226	ber. January, March, May, July, November and	1,007	46	1,051
į	563 564	Kendrapara ,,	175,823	Ditto	Ditto	734	December, January to August, Nov- omber and December,	1,640	247	1,395
	565	Δul ,,	91,015	Ditto	Ditto	803 799	ember and December. January, March, May, June, August and Octo- ber to December.	720 599	136 148	604 451
,[567	Jajpur ,, Dharmsala ,,	289,503 248,762	Ditto • Ditto	Ditto Ditto	878 2,084	January to August, Nov- ember and Docember. January to August, Nov- ember and Docember.	935 . 1,549	27± 551	568 998
		District Total	1,795,085	January	December	7,140	January to August and October to December.	8,912	1,702	7,210

App. II.]

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—continued.

		7	3	77	4	5	1	*6		7	8	9	10	
1	p. 2	_!_						i a .	-	i i		each of	NUMBR THOSE	
Districts.	Number of circles of mortuary	Map.	NAMES OF (JIRCLES.	Population of the cirgles.	Date of first case of Cholera in the circle during the year.		Date of last case of Cholera in the circle during the year.		Total deaths from Cholera, the circle during the year.	PERIOD OF MAXIMUM INTERNITY OF THE DISEASE AS REPURSENTED BY MORTALITY.	Number of villages in the rural circles.	Affected by Cholors.	Not affected by Cho- lera.
	İ		Doni	Т.	21,784	January 1886		December 188	3G	623	January to August and October to December.	1	91.0	1,005
í	1	-	Puri Puri	R.C.	197.349	Ditto		Ditto		1,279	January to August, Nov-	1,317	312 282	1,00
	1		Pıpli	"	226,782	Ditto		Ditto	•••	1,006	January to April and	1,001	82	87
	11	570		,,	116,167	Ditto		Intto	•••	303	February to August, November and Decem-	953	"	01
?uri <		671	Gop Khurda	••• 41	269,478	Ditto		Ditto		406	ber. January, February, July, November and Decem-	803	118	68
	! !	572	Bhanpur	,,	53,927	Ditto	•••	Ditto		196	ber. January to March, July to September, Novem-	509	41	44
		573				Turniany		December	•••	3,813	ber and December. January. May and July	5,166	836	4,8
			District T	otal	868,487	January	•••	Decomiso.	•••		December.			
	1				90 945	Tax ingu		December		152	January to July and	1	,	
	r	57 4	Bu asoro	Т.	20,265	January Ditto		Ditto	•••	278	January to May, July, November and Decem-	580	107	4
		675	Balasoro	R. C.	87,420			Ditto	•••	552	ber. February to May, July.	1,321	122	1,1
	Ш	576	Soro	,,	197,508	Ditto	••) Ditte	•••	1	November and December.	1	50	,
		577	Jellusoro	**	55,102	Ditto		Ditto	•••	91	January to May, July November and Decem- ber		143	
Balasore	<u> </u>	578	Baliapal	••• 1	88,226	Ditto	•••	Ditto		1	January to May, Nov- ember and December.	1	75	
Baiasore	11		Basta	"	71,180	Ditto		Ditto	•••	229	November and Decem		"	
	11	579	Liubin.			Thinks		Ditto		669	ber. January to August and	1,840	166	1,1
	il	580	Bhadrak	,,	169,972	T	•••	Ditto		100	January to May	477	50	
	П	581	Basudevpore Dhamnagar		71,854 182,821		•••	Ditto	•••	1 1 000	January to August and October to December.	867	366	
		582	Chandbali		51,926			November	•••	164	January to May and Jul	310	-	-
	Ч	683	District 7	11 Potul	945,280	January	•••	Decembe		4,22	i ember and Decem	. 6,393 -	1,113	5,
			District			-					ber,		1	
		584	Hazaribagh	T.	15,300		•••	October November				• 1	. 8	
		585 586	Hazaribagh Chatra	B.C	1 419 112	31	•••	October	.,		October	. 827	3	
	11	5H7	Ragodhar Simoria	**	. 02		•••	November	••		Slight	. 325	. 2	1
	11	588 5*9	Kashmar	,,	10 48	Compa		Amerist	:		Do	408		1
		\$90 591	Jogeswar Barhi	,,	53,59 52,05	November		November May		~ [3 November 5 Slight	. 507	î	
Hazaribagh	11	592 593	Huntergung Ramghar		56,95 72,95	march	•••	September	•		5 Do 2 Very slight	321	1	
	Ш	594 595	Tandowa	,	55,78 53,37	5	•••	December		"	Very slight	451 7±7	2	
	il	596 597	Pachumba	••• ••	86.09 68,68	February		April	•	::	3 100	1,05	2 1	1
	Ш	598 599	Kharakdih		150,54 73,80	5 April					- I - I - I - I - I - I - I - I - I - I		_	_
	Ų	воо	Kodsrma District	Total	1 104 74			December		4	Very slight	7,70	23	3 7
	İ		District	Total	·	-		May						
	d	601			18.44 122,15	3 May 2 November	••	. December				81 35	3	'
	-11	602 603	Silı	17	68,33 95,69	5						81		
	- 11	604 605	Lodhmaor	Kara	67,96 56,29	8						24 39		1
	Ш	607	Torpa or K	huten "	104,14 66,28	0						57		
		60f	Barway or	Chain-	51,00							51 32		
	ij	610	pura Korambe o	or Sussel .,	19,0 122,0	18						62	7	1
		61 61	Lohardugg		108,7	9						17	3	. 1
Lohardugga .	{	61	Bassia	21	66,0 88,2			November			0 June and July	58	2 1	
		61	5 Daltongun 6 Garwah	ge ,,	64,20 76,8	D.tto	:	Soptember	•		June to September	" i		
•		61	7 Ramkunde Ranka.	or "	98.5	gi July		August .			July and August		99	8
	ļ	61	9 Paten .		79,6	55 Ditto		September		•••	•	39	7	- 1
	1	62	howada.	_	102.5	1 -		November	•	'''	June to September a November.		98	32
	- 1	G	Munksh .	,:	46,6	93				1		8,0	_	40
	í	1	Distric		1,609,	44 May		December	•	1,0	29 A STED NO TERROR	","	1	ı

Statement prefixed to Map illustrating the distribution of Cholera in the Bengal Presidency during the year 1886—concluded.

1	2	3	4	, 5	6	7	. 8	р		10
	ortuary a on the		ż	Cholera ne year.	olers in Fear.	Cholers in		each of		BER OF
Districts.	Number of circles of mortuary regretrations as shown on the Map.	Names of Circles.	Population of the circles	Date of first case of Cholera in the circle during the year,	Date of last case of Cholers in the circle during the year.	Total deaths from Cholers in the circle during the year.	PERIOD OF MAXIMUM INTENSITY OF THE DISEASE AS REPRESENTED BY MORIALITY.	Number of villages in the rural circles.	Affected by Cholera.	Not affected by Cholera,
Singbhum {	623 624 625 626 027 628	Chaibassa R.C. Chaibassa R.C. Chakardharpore Ghakailla Khursowan Sornikila	6,006 205,682 76,408 165,709 31,127 77,062	January 1886 April January	October 1886 April	 8 5	Very slight	1 812 380 1,214 118 568	1 1 2	1 812 380 1,243 118 567
Manbhum }	634 635 636 637 638 639 640 641 642 043	Purulia T. Purulia R.C. Raghunathpur Jhalda Manbazar Para Baghmundi Jaipore Ichaghar Barabhum Gourandi Chas Govindpore Topchanchi Toondi Jharia District Total	9,304 177,497 108,668 67,133 68,615 89,740 33,384 24,258 64,242 135,847 45,713 80,173 50,627 48,013 18,417 39,654	March	August December December November December April December Ditto Ditto Ditto Ditto Ditto Ditto Ditto	2 7 22 3 8 9 9 6 17 20 20	Slight Very slight Angust Verys light Do, April Very slight Slight Do, Do, October and November November October	1 844 451 152 152 177 119 285 844 226 363 363 381 844 863	1 5 6 2 4 4 4 4 4 4 5 5 6	830 445 290 431 148 177 119 284 840 222 823 850 875 844 863

Office of the Sany. Commr. for Bengal,

The 16th April 1887.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

APPENDIX No. III.

SUMMARY OF SANITARY WORKS, IMPROVEMENTS, &c., CARRIED OUT IN TOWNS AND DISTRICTS, INCLUDING PRIVATE CHARITIES,

DURING THE YEAR 1886.

Summary of the Sanitary Works, Improvements, &c., which were carried out in the Towns and Districts of Bengal during the year 1886.

IN THE TOWNS.

In Burdwan District. - Burdwan. - The water-works were completed, the cost of this year amounting to Rs. 20,000. Cutwa.—A lane was constructed for Rs. 82. Dainhat.—A portion of the side drains to the sudder road was completed. and the romainder was in hand, the total cost amounting to Rs. 350; and a charitable dispensary was established. Kulna.— Roads, pucca and kutcha, with culverts, were constructed for Rs. 138.

In Bankura District.—Bankura.—One kutcha public latrine was constructed for Rs. 415; one pucca drain was constructed cost Rs. 226, and one kutcha drain was opened up for Rs. 48; two drains with oulverts were constructed, and one was in progress, the former at a cost of Rs. 267 and the latter at Rs. 300. Bishenpur.—Reads, with culverts, cost Rs. 221,

were constructed, and similar works were in progress, cost Rs. 862.

In Birbhum District.—Suri.—Only a kutcha drain was constructed in one of the wards to prevent it being inundated, which cost Rs. 49.

In Midnapore District.—Midnapore.—Three roads with four culverts, and a revet. ment and a pucca drain, were constructed, the former at a cost of Rs. 429 and the latter at Rs. 28: and the main khall or drain was being cleaned, cost Rs. 126. Tumluk.—A well was sunk for Rs. 197; and three roads for Rs. 75, a drain, two bridges and a gate for the Parbattipus sluice, at a total cost of Rs. 62, were constructed; two roads were metalled for Rs. 307; and a shed was put up for the mehters, cost Rs. 45. Ghatal.—The hospital for in-door patients which was washed away by the floods, and new roads were constructed, the former at a cost of Rs. 125 and the latter at Rs. 381. Chandrakona.—New roads were constructed for Rs. 75, and the Municipal tank was re-excavated for Rs. 520. Ramiibanpur.—Some new roads were completed and some were in progress, cost Rs. 113. Khirpai.—Nine culverts were

put up, cost Rs. 51.

In Hughli District.—Hughli and Chinsurah.—Ten drains were excavated at a cos-In Hughli District.—Hughu and Chinsuran.—Ten drains were excavated at a cost of Rs. 1,048; several culverts were put up which cost Rs. 1,984; three roads and three lanes were constructed for Rs. 964; roads were metalled at a cost of Rs. 211; and a ghât was provided for Rs. 196. Serampur.—Roads were constructed which cost Rs. 4,346; urinals set up for Rs. 87, and drainage improved at a cost of Rs. 196. Six bunded break-waters and a kutcha-pueca wall, 175 feet in extent, were constructed on the river bank, to protect the foreshore from being washed away. Several Ranigunge pipe culverts were put up with the increase the waterway and facilitate the flow of water to the Dankoni fields. Several cess-pool and filthy tanks were filled up. Utterpara.—A culvert was put up for Rs. 498; roads motelled. and filthy tanks were filled up. Utterpara.—A culvert was put up for Rs. 493; roads metalled for Rs. 107; and a road was being metalled, and two roads were being constructed, Rs. 30 having been expended on the former and Rs. 150 on the latter. Bansberia.—One permanen public latrine and six temporary ones were constructed for Rs. 159. Baidyabatti.—Eighteen culverts and some drainage pipes were provided for Rs. 345; land was acquired in the Champ dani bustee at an outlay of Rs. 489; three roads and two lanes were metalled for Rs. 3,274 two rooms were added to the dispensary at a cost of Rs. 744; and the metalling of one roa was in progress for which Rs. 100 were paid. Bhudressur.—A drain was constructed which cos Rs. 232, and 19 culverts were put up at an expenditure of Rs. 793; and the construction of a culvert and the metalling of a road were in progress. Kotrung.—Road metal was purchased for Rs. 90; and 12 culverts were set up at a cost of Rs. 91. Kharakari Radio purchased for Rs. 90; and 12 culverts were set up at a cost of Rs. 91. Khanakool.—Publi latrines were constructed for Rs. 100.

In the Howrah District. Howrah. - No original sanitary works were undertake during the year in this important Municipality, but arrangements were in hand for providin three burial grounds for Mahomedans, by subscription, and for removing in a steam tramwa outside of municipal limits the night-soil and sewage matter for the southern portion of the town -Roads were metalled at a cost of Rs. 2,034 and some new roads were constructed; complete drainage scheme is under consideration; and steps were being taken to provide

square or place of public resort for the people.

In 24-Pergunnahs District.—Suburbs of Calcutta.—Four roads and seven lanes wer metalled at a cost of Rs. 5,929; improvements to drainage and roads were effected by ne constructions, extensions, provision of culverts and in other ways, the former for about Rs. 5,282 and the latter for about Rs. 1,400; and a latrine was constructed which cost Rs. 5. It is reported that my suggestions regarding the improvement of the bustis and the drainage and the supply of filtered water in this Municipality were carefully considered by the Municipality is shortly to be amalgamented with Calcutta. South Suburban Municipality. Thirteen roads and one lane were metalled for Rs. 4,013, and similar attention was being paid Thirteen roads and one lane were metalled for Rs. 4,010, and similar attention was being paid five other roads, the cost amounting to Rs. 2,054. Baranagore.—Two roads were metalle for Rs. 1,278; improvements to drainage were effected by provision of culverts, waterway &c., which cost Rs. 447. North Barrackpore.—Roads were constructed and drainage with improved, the former cost Rs. 3,603 and the latter Rs. 301, and three roads were being constructed for Rs. 662. North Dum-Dum.—A road was metalled for Rs. 1,000. Baraset.

Some drains were cleaned and levelled which cost Rs. 1,232; and 10 culverts were being put up for Rs. 397. Naihati.—Twenty-four culverts were provided at a cost of Rs. 313 and 11 roads were metalled for Rs. 2,436; and five roads were being metalled for Rs. 1,684. Busirhat.—Some drainage pipes were introduced which cost Rs. 35, and a latrine was being erected for Rs. 100. Rajpore.—Twenty-three roads and six lanes were metalled at a cost of Rs. 1,370, and similar attention was being paid to 20 roads and 3 lanes, at an expenditure of Rs. 1,403. Bariepur.—Five roads were metalled for Rs. 650; a latrine was constructed in the Municipal office compound for Rs. 29; and four culverts were provided for Rs. 109, and two culverts were being put up for Rs. 82.

In Nuddea District—Nuddea.—Two drains and a culvert were constructed at a cost of Rs. 92, and a road was being metalled for Rs. 314. Ranaghat.—Conservancy and cart-sheds were completed, the balance of the cost amounting to Rs. 580. Birnagar.—A road was metalled for Rs. 599, and a pucca drain was constructed, which cost Rs. 63, and another road and two culverts were in course of construction, the cost of the former amounting to Rs. 59, and that of the latter Rs. 93. Coomarkhali.—Two pucca roads were amounting to Rs. 59, and that of the latter Rs. 93. Coomarkhali.—Two pucca roads were constructed for Rs. 1,707. Meherpur.—Bricks for roads were purchased for Rs. 167; ditches were excavated around the burial-ground, which cost Rs. 85; and three wells were sunk at a cost of Rs. 45. Santipore.—Bullocks for the scavenging cart were purchased for Rs. 24; a masonry drain was constructed at a cost of Rs. 2,003; land was purchased for the Mahomedan burial-ground for Rs. 102; a charitable dispensary was constructed which cost Rs. 718; a ghat for Rs. 21 and three bathing ghats for Rs. 62 were erected; bridges at Senpara for Rs. 656 and a bund for Rs. 42 were constructed; three culverts were put up for Rs. 701; and three roads constructed which cost Rs. 347; and trees were being planted at a cost of Rs. 30. Kishnaghur.—Three masonry wells were sunk at a cost of Rs. 184, and two were being sunk which cost Rs. 600; five culverts were also being put up; seventy well-privies were filled up; and some tanks were re-excavated.

In Jessore District.—Kotechandpur.—Seven roads were constructed at a cost of

In Jessore District.—Kotechandpur.—Seven roads were constructed at a cost of Rs. 185; two urinals set up for Rs. 18; and three culverts provided which cost Rs. 55.—
Moheshpur.—A pucca drain along the sudder road was constructed for Rs. 973.

In Murshidabad District.—Berhampore.—For the improvement of drainage a sluice and three culverts were put up at a cost of Rs. 445; the drainage channels which pass eastward to the Echa nullah were cleared out, and a shed was constructed for cholera patients for Rs. 28.—City Murshidabad.—Two pucca and two kutcha latrines were constructed, the former at a cost of Rs. 348 and the latter at Rs. 67; six water reservoirs were provided for Rs. 123; and a drain and two culverts were constructed for Rs. 467, and two pucca latrines, two sluice gates and a drain were under construction, the total cost amounting to Rs. 157.—

Jungipur.—A latrine was erected outside the municipal compound for Rs. 48; two roads for Rs. 400, and a cattle shed were constructed; conservency carts were provided at a cost of Rs. 123; and drains were cut which cost Rs. 65. Kandi.—A road was metalled at a cost of Rs. 659; two bridges were constructed and six culverts were put up for Rs. 172; and a lane opened out for Rs. 10; and two roads were being metalled at an expenditure of Rs. 163, and the Grish Chunder hospital was approaching completion.

The bazar and steamer ghat roads were metalled for Rs. 163, and the Grish Chunder hospital was approaching completion.

Rs. 368; and a road was constructed in Boonapara, which cost Rs. 513. Satkhira.—A road was

widened by filling up the drain on its side, cost Rs. 51. Chanduria.—A survey and plan of the town were made for a scheme of drainage at a cost of Rs. 112.

In Dinajpur District.—Dir ar "wo public latrines were constructed at a cost of Rs. 654; and two roads were metalled for Rs. 1,639; and the drainage scheme long under contemplation has been sanctioned by theoremsent and will be shortly undertaken contemplation has been sanctioned by Government and will be shortly undertaken.

In Rajshahye District.—Nattore.—A tank was excavated in one of the wards and a ghat provided for it at a cost of Rs. 3,125; and a portion of one of the roads was metalled.

In Rungpore District.—Rungpore.—A saucer-shaped drain was constructed for draining the northern portion of the Mahiganj bazar at a cost of Rs. 900; a kutcha drain was excavated at Nawabganj, Mahiganj and Dhap for draining accumulations of rain water in these localities which cost Rs. 300; a portion of a road was metalled for Rs. 279; and three wells were sunk at Nawabganj for Rs. 15.

In Bogra District.—Sherpur.—One culvert was constructed for Rs. 42; and another was in progress, cost Rs. 15.

In Pubna District.—Pubna.—Two plots of land were acquired for public latrines and a burial-ground, for which Rs. 691 and Rs. 11, respectively, were paid as compensation; a public latrine was constructed, which cost Rs. 469; one night-soil cart was purchased for Rs. 170; 15 wells were excavated at a cost of Rs. 1,067; and two embankments and two temporary bridges were erected over the river Ichamutty for the protection of river water, cost Rs. 779. Serajganj.—Eight roads were constructed in different parts and provided with wooden pipes at a cost of Rs. 476; a tank was excavated for Rs. 50; culverts and sluices were provided on the Dhaobundi and Kutckerry roads, cost Rs. 284; a temporary bridge was constructed over the Dhaobundi river for Rs. 104; six wells were sunk for Rs. 78; one pueces and three kutche latrices were created at a total cost of Rs. 436; and the metallone pucca and three kutcha latrines were erected at a total cost of Rs. 436; and the metall-

ing of a road was in progress at an estimated cost of Rs. 1,398.

In Darjiling District.—Darjiling.—Twenty-six stone, two wooden, one kutcha, and a series of saucer drains were constructed in different places in extension of, and for the improvement of the existing drainage system, at a cost of Rs. 6,204; a shed for the chowkidar at Bhutea Bazar, and another for the protection of the wire tramway machinery were

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erected for Rs. 142; the water-works scheme was extended to Annandale Location, to the meat shed, and to the Goompara Bazar at a cost of Rs. 1,413; two latrines were constructed for Rs. 136; and trees were planted for Rs. 268; and the following works were in progress: two stone drains for the purpose above indicated, a bathing place in the bazar, one shed for the slaughter-house chowkidar, tanks for dhobies, a two-seated public latrine, and extension of the water-works scheme to the Hindu cremation ground. Kurseong.—A latrine and an urinal were constructed, the former cost Rs. 467 and the latter Rs. 149; a latrine was improved for Rs. 22, and materials for extending the water-works to the dak bungalow, cost Rs. 477 for the head water-works Rs. 100, and for a railway. Rs. 80 years callected

cost Rs. 477, for the head water-works Rs. 109, and for a railway. Rs. 80 were collected.

In Julpaiguri District.—Julpaiguri.—No original sanitary works were executed, as the Municipality has been in existence for only two years; but many minor improvements,

calculated to benefit the town, were undertaken.

In Dacca District.—Dacca.—Nine of the abominable "gors" were filled up departmentally with street sweepings, and the filling up of seven others were in progress; several ross pipe drains were substituted for plank drains departmentally; and five roads and one lane were metalled, cost not stated. Narainganj.—The cess-pool west of the Eastern Bengal Railway office was filled up at a cost of Rs 7,318; the following sheds were erected: two sheds in the Khanpore burial-ground for Rs. 370, including cost of fencing and filling up of hollows, a shed in the burning ghat for Rs. 821, sheds in the mehter lines for Rs. 497, a cholera shed for Rs. 85, and sheds near the iron latrine for Rs. 54; an iron latrine was put up for Rs. 194; a slope was prepared for the Shitalakhya bridge for Rs. 211; five roads were metalled at a cost of Rs. 2,254; kutcha road-side drains were excavated for Rs. 56; Ranigunge pipes were supplied to a road, cost Rs. 39; and a pit was filled up for Rs. 71; and a bridge at Tan bazar and two pucca surface drains were being constructed, the estimated cost of the former being Rs. 3,596 and of the latter Rs. 265.

In Faridpore District.—Faridpore.—Two roads were metalled at a cost of Rs. 350; and one was in progress, cost Rs. 300; and seven drains were constructed at an expenditure

of Rs. 68. Madaripur.—A tank was excavated for Rs. 40, and a drain cost Rs. 19.

In Backergunge District.—Barisal.—Drainage pipes to two roads and connecting pipes between a tank and the river were provided, at a cost, respectively, of Rs. 92 and Rs. 63; and the construction of two road-side drains was progressing at a cost of Rs. 1,386. Perozepur.—Two wooden bridges over a khall were constructed for Rs 60; the jetty over the Damodar was extended at a cost of Rs. 180; a khall was excavated which cost Rs. 45;

a road was constructed for Rs. 42; and a public garden was being established, at an expenditure of Rs. 200. Jhalokati.—A road was being constructed for Rs. 103.

In Mymensing District.—Nasirabad—Three pucca and two kutcha latrines were provided, the former at a cost of Rs. 1,275 and the latter, (for the kutcherries) lts. 26; the levels of the drains were taken to secure free discharge of rain water, at a cost of Rs. 708; and a tank was re-excavated for the convenience of people residing at a distance from the river which cost Rs. 713. Muktagatcha.—Three roads were constructed and three were metalled, the former for Rs. 101 and the latter for Rs. 1,580. Janalpur.—Four roads were constructed for Rs. 154; a well was sunk for Rs. 15, and 26 bridges were erected, some of which were provided with glazed earthen pipes, at a cost of Rs. 684. Sherpur.—Two roads were constructed and five metalled, the former cost Rs. 196 and the latter Rs. 1,792; two drains were cut, which cost Rs. 55; and 12 bridges, provided with glazed earthen pipes, were erected for Rs. 629. Kishorcganj.—Three roads were constructed at a cost of Rs. 566; a bridge erected for Rs. 50; a tank re-excavated for Rs. 300; and glazed earthen pipes purchased for 10 culverts for water-ways at a cost of Rs. 296. Bazitpur.—A tank was excavated which cost Rs. 388.

In Noakhali District.—Noakhali or Sudharam.—A bridge was set up for draining

the western extremity of the town which cost Rs. 40, and two roads were constructed for Rs. 30; and the re-construction of a pueca drain in view to providing systematic drainage for the Bori Bazar ward was in progress at a cost of Rs. 400.

In Tipperah District.—Comillah.—Some of the roads were metalled at a cost of

Rs. 410, and a bridge for draining off surface water was constructed for Rs. 535. Brahman--Four drains and six bamboo bridges which cost Rs. 198, and ten new roads and five culverts, which cost Rs. 600, were constructed, and two tanks were excavated and turfed at a cost of Rs. 800.

In Monghyr District.—Monghyr.—A pucca well was sunk for Rs 533; the municipal market was paved with stone at a cost of Rs. 752; eight culverts were put up for improving drainage which cost Rs. 218; a causeway was constructed for Rs. 79; and a road was motalled for Rs. 371. Jamapur.—Three pucca wells were sunk at an expenditure of Rs. 454; one masonry corrugated iron-roofed latrine and one entirely of iron were constructed for Rs. 1,086; and three culverts were put up for Rs. 45. Janui.—A tank was excavated for Rs. 65.

In Bhagulpore District.—Bhagulpore.—Two latrines were constructed in the hospital

compound for Rs. 582; drainage improvements were carried out by putting up 12 culverts, breast wall, &c, at a cost of Rs. 366; and a road was metalled which cost Rs. 197; and four culverts were being constructed for Rs. 136; the water-supply scheme was being proceeded with; and arrangements were being made for the erection for an asylum for paupers, the destitute

and the aged.

In Purneah District.—Purneah.—Drainage works referred to in last year's Report for carrying off stagnant water from the town were completed which cost Rs. 2,078; a corrugated iron urinal was put up near the kutcherries for Rs. 8; and a culvert was supplied to

the Circular road for Rs. 995.

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-Seven drains were constructed at a cost of In Maldah District. - English Bazar. -Rs. 931. Old Maldah.—A road was metalled for Rs. 76, and four drains constructed for Rs. 637.

In Sonthal Pergunnahs District. - Deoghur. -- A culvert was put up for Rs. 52; and a well was being sunk by the side of the Grand Trunk Road at a cost of Rs. 198. Sahebgunge—Two pueca latrines were provided at an expenditure of Rs. 500; a pueca drain was constructed and a culvert supplied, the former costing Rs. 858 and the latter Rs. 14; two wells were sunk in the bustis for Rs. 159; a slaughter-house with pueca floors was constructed which cost Rs. 103; a shed for a vaccination depôt was erected for Rs. 125; a road was metalled which cost Rs. 1,249, and trees were planted on the road sides at a cost of Rs. 45; and a road was being metalled for Rs. 352.

In Patna District.—Patna City.—A pucca drain was constructed at a cost of Rs. 277, and provision was made in the Budget for the completion of the outfall drain along the new Chowk road. Barh.—A culvert was put up to allow of rain water draining from one of the wards to the river which cost Rs. 24. Behar.—Three roads were metalled for Rs. 480; 17 culverts were put up at a cost of Rs. 436; a drain was constructed for Rs. 535

to permit of accumulated water flowing off.

In Gya District.—Gya.—Two public latrines were re-constructed at a cost of Rs. 365; two temporary latrines were constructed in the river bed, which cost Rs. 54; a well was sunk in the bullock shed compound for Rs. 113; ten new rubbish carts were purchased for Rs. 650; wooden traps were supplied to some of the drains at a cost of Rs. 32; two sheds, one for bullocks and the other for the domes, and a store godown were constructed at a total cost of Rs. 1,724; and a new hospital for pilgrims was being constructed at an estimated cost of Rs. 10,990. Tikari.—Two public latrines were being constructed at a cost of Rs. 324.

In Shahabad District.—Arrah.—Two urinals were put up which cost Rs. 61, and

three latrines for females were being constructed. Sasseram.—Roads were constructed for Rs. 700 and a drain for Rs. 252; five portable latrines were provided at a cost of Rs. 70; and five sewage and some watering carts were constructed for Rs. 276; and a slaughter-house was being built which is to cost Rs. 437. Jugdispur.—Roads were metalled which cost Rs. 88. Buxur.—Roads were metalled at an expenditure of Rs. 250, and Gouri Shanker's tank was being excavated for Rs. 349. Bhabuah.—Three conservancy carts were provided for Rs. 100. Dumraon.—One pucca and some kutcha drains were in course of construction at a total cost of its. 550, and latrines were being erected for Rs. 100.

In Mozufferpore District. - Mozufferpore. - Three latrines were constructed for Rs. 783; the drainage was improved by means of pipes and drains at a cost of Rs. 61; and levels for the drainage scheme referred to in previous reports were being taken. Hajeepur — Two roads were being metalled, the estimated cost being Rs. 1,559. Lalgunge.—A road was

metalled for Rs. 307. Sitamurhi.—Three latrines were erected at a cost of Rs. 185.

In Durbhanga District.—Durbhanga.—Nine urinals were set up for Rs. 83; a drain and 10 culverts and bridges were constructed, the former costing Rs. 360 and the latter Rs. 1,210; and a slaughter-house was provided at a cost of Rs. 683. The works in progress were: the erection of ten culverts and bridges, the substitution of drainage pipes for small culverts, the metalling of a road, and the construction of four public latrines, at an expenditure, respectively, of Rs. 800, Rs. 369, Rs 1,990 and Rs. 800.—Madhubani.—A road was metalled at a cost of Rs. 967; eight culverts were put up for Rs. 50; six bye-lanes were opened, which cost Rs. 30; one urinal was set up for Rs. 23; a house was constructed in the market for Rs. 536; and two neglect soil, one scavenging, and watering carts (number not stated) were constructed, at a total cost of Rs. 122; while four urinals (Rs. 19)

and four scavenging and two night-soil carts (Rs. 40) were in course of construction, and bricks for metalling the roads were being manufactured for Rs. 75.

In Sarun District.—Chupra.—Ten drains with two culverts were constructed for Rs. 62; five roads were metalled which cost Rs. 1,074; and rubbish, latrine, urine and watering carts (one each) were provided at a cost of Rs. 449. Sevan.—A pucca shallow drain on both sides of the Nayabazar road was constructed at a cost of Rs. 537, and a similar drain

on both sides of the Mukdum Scrai road was in progress of construction for Rs. 200.

on both sides of the Mukdum Scrai road was in progress of construction for Rs. 200.

In Chumparan District.—Bettiah.—A road was metalled for Rs. 468 and another was being metalled for Rs. 240; and spill drains were provided for the wells at a cost of Rs. 86. The construction of a saucer-shaped drain was also progressing at a cost of Rs. 740.

Motihari.—One pucca and three kutcha roads and eleven bridges were constructed—the roads cost Rs. 87 and the bridges Rs. 231; and the construction of a road and the metalling of another in the market were in progress, cost of former Rs. 200 and that of latter Rs. 450 latter Rs. 450.

In Cuttack District.—Cuttack.—A drain with two bridges were constructed at a cost of Rs. 468; pucca shoots were provided to a drain for Rs. 60; two pucca latrines and two urinals were constructed, the former at a cost of Rs. 373 and the latter of Rs. 20; a lane was metalled for Rs. 37; one pucca and one kutcha wells were sunk for Rs. 122 and Rs. 25, respectively; a cattle-shed was erected, which cost Rs. 83; and the following works were in progress: metalling of a road at a cost of Rs. 284; constructing a pucca drain, Rs. 600; widening a road, Rs. 1,000; providing six curvers, Rs. 72; and erecting ten latrines, Rs. 100. Kendrapara.— Two roads were metalled for Rs. 1,315; a house for cholera patients was constructed which cost Rs. 131; and a dispensary and a bridge, blown down during the cyclone, were reconstructed for Rs. 1,051 and 422, respectively.

In Puri District — Puri.—The Upper Armstrong road and roads in the civil station

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were constructed, the former at a cost of Rs. 2,200 and the latter at Rs. 1,522 paid from the Government Kendrapara Fund; the foot-path on the sea beach was metalled for Rs. 593; two latrines for females were provided which cost Rs. 188; seven urinals were put up in different parts of the town for Rs. 96; a side drain near Dolebedi cost Rs. 139; the Setgunge tank was cleaned at a cost of Rs. 500; the water-supply scheme by means of wells and settling tanks was submitted to Government for an ecot of Rs. 1,322, and an enclosure was provided for the cremation ground for Rs. 370.

In Balasore District —Balasure.—A slaughter house was constructed at a cost of Rs. 322, and the drainage works were being proceeded with, the expenditure incurred this

year being Rs. 1,265.

In Hazaribagh District.—Hazaribagh.—A latrine was erected near the market for Rs. 100, and the construction of two roads was in progress for Rs. 400. Chattra.—Drainage works were constructed at a cost of Rs. 387, a market with a road at Rs 453, and the Kamartoli road at Rs. 56; and the malarious swamps near the jail were converted into a lake by prison labour.

In Lohardugga District.—Ranchi.—No sanitary works were undertaken in this town of an original nature.

In Singbhum District.—Ohyebassa.—A well was sunk for Rs. 114; two galvanized iron (Hornbury's) latrines, one for males and the other for females, were put up at a cost of Rs. 629; and two roads were constructed which cost Rs. 29.

In Manbhum District.—Purulia.—The only sanitary work was the pitching with rubble stone some of the road-side drains at a cost of Rs 90.

IN THE DISTRICTS.

Burdwan.—Some roads at a cost of Rs. 15,627, a masonry bridge on the Kulna-Cutwa road across the Chunari khall (Rs. 9,043), and some village roads (Rs. 13,427) were constructed by the Road Cess Department. Moreover, Rs. 6,751 were-advanced to landholders and superior tenants for excavating new and clearing and deepening old and silted up tanks.

Bankura.—Ten village roads were constructed by the Road Cess Committee.

Midnapore.—Thirty-nine grambheris (embankments) were constructed and 57 turfed in different parts by the Jalamutha, Majnamutha and Bolrampur Estates, the former at a cost of Rs 8,724 and the latter at 5,254, and a tank was excavated by the Military bazar Estate for Rs 409. In the sub-divisions of Ghatal and Tumlook village roads were constructed. In the sub-division of Contai tanks were excavated. A road from Balichak to Sabong was in course of construction This road is important as it will open up a part of the country hitherto accessible with difficulty. The Surpai drainage scheme, referred to in former Report, was being proceeded with, the cost of this year amounting to Rs. 42,057.

24 Pergunnals.—The Road Cess Committee metalled the Nimta Road, constructed two

large culverts on the road to Kulpi and several minor works of the same class, at a total cost of

 $\dot{N}uddea$.—Two relief roads were undertaken to give occupation to labourers who were in distress owing to the exceptional inundation of 1885, and four other village roads were constructed for Rs. 212.

Jessore.—Several roads were constructed, but they appear not to have been provided with sufficient drainage water-way; an important improvement was effected, viz., that the fishermen's bandals, which used to obstruct the current of the river Bhyrub and thus defile its water, were removed from several parts of the river; and one tank was excavated by the Wards' Estate in Narail.

Dinajpur.—The drainage canal was cleared and a bridge erected; and a tank was excavated by the Sunkerpur Wards' Estate at a cost of Rs. 7,000.

Rajshahye. - Fifty-two new wells were sunk.

Pubna.—Two roads were constructed by the Road Cess Committee at a cost of

Darjiling .- A road was constructed for Rs. 2,000; the Thibetan encamping-ground at Kalimpong was reclaimed, the cost for compensation to the ryots being Rs 742; trees were planted in the Terai for Rs. 305; the Matiagurah hat was improved at a cost of Rs. 70; and a water reservoir was constructed at Rangapani in the Terai which cost Rs. 300.

Dacca.—Two village roads were constructed.

Faridpur.—Four tanks were excavated in different parts, at a cost of Rs. 636; and some

village roads were constructed.

Buckergunge.—Fifty-eight roads were constructed which cost Rs. 18,901; seventeen khalls were cut for Rs. 2,339; and one tank was excavated for Rs. 150, in different parts of the district, by the Road Cost Department.

Mymensing.—A railway feeder road from the Balipara station to Ramporehat was cons-

tructed and provided with sufficient water-way.

Chitttagong.—In the Khas mehals in Cox's Bazar tanks were excavated and land

provided for burial-grounds for villages.

Noakhali.—Two bunds of the khal along the old Lakhipur road were cut for Rs. 1,540; the Sundip road was extended which cost Rs. 817; a road was constructed on the chur of the little Fenny river for Rs. 425; the drain along the Shenbagh read was extended, which cost Rs. 202; and nine bridges were constructed for Rs. 7,215.

Tipperah.—Twelve roads were constructed and 3 khals excavated by the Road Cess Department at a total cost of Rs. 10,530.

Bhagulpore.—A few tanks were excavated.

Maldah.—The Road Cess Department metalled roads, excavated kutcha drains, and constructed bridges at a cost, respectively, of Rs. 2,500, Rs. 1,000 and Rs. 2,200. They also completed two miles of road in thana Gomasthapur.

Southal Pergunnahs.—Bunds were drawn across valleys, &c. for the storage of water, and much attention was paid to forest conservancy for promoting a continued supply

of water.

Patna.—The Government of India sanctioned Rs. 2,000 for the improvement of the water-

supply for the cultivators who come into Behar for the weighment of their opium.

Gya.—The Road Cess Department constructed the Phulgoo and Mirhur bridges with ample water-way, and expended Rs. 2,532 in planting trees on the district roads.

Shahabad.—A road was constructed from Bhabuah police-station to Bhabuah-Mohania and provided with sufficient water-way, at a cost of Rs. 262.

Durbhanga.—Two village roads were constructed in the Madhubani Sub-division.

Sarun.—Two railway feeder roads with bridges and culverts were constructed; some important main roads were raised and metalled; side drains were provided to some bazars; several bridges and culverts were constructed; and 12 miles of roadway have been planted with trees, chiefly fruit bearing.

Chumparun.—Some roads were constructed and provided with sufficient water-way by

the Road Coss Department.

Cuttack.—The excavation of the canal from Jeypore to Akhuapada was being progressed

with; and a few village roads were constructed.

Puri.—A well was sunk at Baliabari hat for Rs. 45 from the Government Khas Mehal Fund; the district portion of the Upper Armstrong road was constructed for Rs. 4,598; and culverts were put up on the road from Khurda to Patrayaka which cost Rs. 5,996, paid from the District Road Fund.

Hazaribagh.—As the tank near the outpost of Beyro was condemned by the Sanitary Commissioner, a well was excavated by the Police Department for obtaining purer water, for Rs. 50; and a village road from Angura to Golalsudh was constructed by the Road Cess Department and provided with sufficient waterway.

BY PRIVATE INDIVIDUALS.

Burdwan.—A water reservoir was constructed for Rs. 300 by the Bengal Coal Company; and a tank was re-excavated for Rs. 1,000. The latter work, undertaken to meet local wants, will also supply water to pilgrims.

Midnapore.—Twenty tanks were excavated, five reclaimed, and a pucca ghât provided to a tank, in different parts of the district, at a total cost of Rs. 8,911.

Hughli.—A pucca ghât with shelter was erected at Champdani, at a cost of Rs. 600, and a metalled road from the Grand Trunk Road to the river at Bhudressur was constructed for

24-Pergunnahs.—Mr. Rendell, one of the Commissioners of the Naihatti Municipality, erected two large filters at Bizipur for the supply of good water for the people. The road from Jagirhat on the Diamond Harber and to Bowali was metalled, and a tank at Saugor Island, for the supply of water to pin, ams, was excavated, the former at a cost of Rs. 5,000 and the latter at 1ts. 458.

Nuddea.—Five tanks were excavated and one re-excavated—the former cost Rs. 2,600 and the latter Rs. 3,670; and a kutcha road was provided for Rs. 240; Srimuti Rani Surnomoi of Cassimbazar paid Rs. 3,670 for the re-excavation of her tank in the Kishnaghur town; and she and Rani Tara Sundari Devi of Bhukoilas contributed Rs. 250 and Rs. 500, respectively, for the improvement of the embankment of the Nuddea town in addition to Rs. 1,116 paid by the Municipality itself.

Jessove. Khulna.—Twenty tanks were excavated in different parts of these districts—

six in Jessoro, at a cost of Rs. 4,200, and fourteen in Khulna, at a cost of Rs. 4,050.

Dinajpur. -- Two tanks were excavated at a cost, respectively, of Rs. 5,000, and 500.

Rayshahye. Bogra.—Forty-six tanks were excavated in different parts of these districts—

thirty-five in Rajshahye, at a cost of Rs. 21,716, and eleven in Bogra, for Rs. 7,982.

Pubna.—Five tanks were excavated in different parts of the district at a total cost of Rs. 4,600, and Babu Obhay Govind Chowdry defrayed the cost of a cholera hospital for the

town of Pubna, which has been commenced.

Farity or c.—Babu Rajendro Chandra Rai excavated in the Faridpore town a tank at a cost of Rs. 1,500, and Moharani Surnomoi of Cassimbazar has offered to contribute Rs. 200, and Babu Kali Krishna Tagore of Calcutta, Rs. 100, for a project of water-supply for the same town. Eight tanks were excavated by others in different parts of the district, at a total cost of Rs. 6,625; and a bridge was erect over a khal for Rs. 200.

Backerganj.—Nine tanks were excavated at a cost of Rs. 2,900; a ghat was erected on the

river bank for Rs. 1,000; and two roads were constructed, which cost Rs. 500.

Chittagong.—Two tanks were constructed at a cost, respectively, of Rs. 200 and Rs. 500.

Noakhali.—A few tanks were excavated near public roads and hats, at a cost varying from Rs. 50 to Rs. 300.

Tipperah.—Six tanks were excavated in different parts of the district at a total cost of 14,550. One of these, a large one, cost Rs. 13,000, and was provided at Laksham by Rs. 14,550. Babu Joshoda Chowdhuri.

Monghyr.—Three tanks were excavated at a total cost of Rs. 1,500, and a water-supply scheme was brought into use in the Jamalpore town by the East Indian Railway Company.

Purneah.—Six tanks, six wells, and a road were constructed at a total cost of Rs. 3,095.

Maldah.—Eight tanks were excavated, in different parts, of the district, at a total cost of Rs. 5,975. The Chanchal Estate, under the Court of Wards, improved the sanitary condition of many villages in thanas Khurba, Ratna and English Bazar, by underthing decimal and decimal and supplied to the sanitary condition of many villages in the sanitary three tanks for Rs. 1,500, and a water-supply scheme was broaden. taking drainage works for Rs. 728, excavating three tanks for Rs. 982, improving two markets for Rs. 260, constructing six roads for Rs. 1,252, and erecting a bund and providing a Dharmasala for Rs. 149.

Sonthal Pergunnahs.—Two bunds for storage of water were constructed by Mr. Grant, zemindar—one of these cost Rs. 1,000; several small tanks and bunds were constructed, and dispensaries established by others. And many trees were planted by the sides of many miles

of roadway by Babu Aparava Krishna Mittra.

Patna.—A pucca well was sunk which cost Rs. 300.

Shahabad.—Eighteen pucca wells were sunk and one tank was excavated in different parts of the district—the former cost Rs. 4,520 and the latter Rs. 1,400.

Durbhanya.—Twelve tanks were excavated in different parts of the district, at a total

cost of Rs. 10,000.

Sarun.—Wells and a few tanks were excavated in different parts of this district.

Chumparun.—Two tanks were excavated by the Duhlin Saheb of Bettiah at a cost of

Rs. 8,000; and a few more tanks and some wells were provided by others.

Puri.—Three tanks were excavated at a cost of Rs. 500, and seven wells sunk, for

Rs. 159, in Puri, Gop, Pipli and Khurda.

Hazaribayh.—A bund or embankment was constructed in Pertabpur in Konda by the

Rajah of that place for Rs. 150.

Manbham. In the Purulia town a large well was sunk by Lala Sayamol Nund, at a cost of Rs. 700, and in the district three tanks were excavated and one re-excavated at a total cost of Rs. 880.

OFFICE OF THE SANY. COMMR. FOR BENGAL, The 13th May 1887.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

APPENDIX No. IV.

STATEMENT SHOWING THE PERCENTAGES OF INCOME EXPENDED IN EACH MUNICIPALITY IN BENGAL FOR ORIGINAL SANITARY WORKS, FOR SANITARY WORKS OF AN ANNUALLY RECURRING NATURE, AND FOR ALL MUNICIPAL EXPENDITURE PROPER.

DURING THE YEAR 1886.

Statement showing the percentages of Income expended in each Municipality in Bengal for Original Sanitary Works for Sanitary Works of an annually recurring nature, and for all Municipal Expenditure proper during the year 1886.

DISTRICTS.	Municipalitims.	Percentages on Original Sanisary Works. Percentages on Sanisary Works of an annually recurring nature.	Percentages on all Muni- cipal Expenditure Pro- per.	Districts.	· MUNICIPALITIES,	Percentages on Original Sanitary Works. Percentages on Sanitary	Works of an annually recurring nature. Percentages on all Huniques or all Muniques.
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Office of the Sany. Commb. for Bengal.,

The 28th April 1887.

R. LIDDERDALE, M. D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

APPENDIX No. V.

ABSTRACTS OF INSPECTION REPORTS ON TOWNS VISITED IN 1886.

Abstracts of Inspection Reports on Towns visited in 1886.

Burdwan Town.—Inspected in January 1886.—I went round the town generally with Dr. O'Brien, the Civil Surgeon, and found that many improvements had been effected since last inspection, the chief among which was the completion of the filtered water-supply The sanitation of the town could not, however, be pronounced to be satisfactory: the grand nuisance of filthy tanks and holes had to be grappled with, and certain localities as are comprised within the wards D and E were in a very insanitary condition. The drainage was very defective, and required much improvement, and the need for increasing the supply of filtered water was strongly indicated. I was, however, glad to see that the Commissioners were manifesting great interest in the sanitary welfare of the place.

The suggestions were—(1) To continue to allot year after year a respectable share of

the nuncipal income towards placing all parts of the town on a thoroughly sound sanitary footing. (2) To take opportunities on the occasion of fires, &c., to widen the narrow lanes. (3) To renew the fencing of many of the tanks on road-sides. (4) To increase, as funds permit, the length of mileage of the roads lighted. (5) To strictly enforce section 236 of the Municipal Act, and gradually do away with grass, &c., as roofing materials. (6) To undertake at once a survey of the town for ascertaining the levels according to which drains can be made, and provide gradually an efficient system of drainage, some progress being made every year. (7) To construct only shallow drains and divort them from emptying into tanks and hollows, and make provision for connecting the house drains with the roadside drains. (8) To take early steps for increasing the filtered water-supply and extending it to the whole town. (9) To devise other means, besides using street-sweepings to fill them up, to lessen the great evil of the large number of foul tanks and holes; to connect the tanks with one another by an open channel, the lowest one either having a communication towards the Banka or to some other discharge outlet. (10) To re-excavate some of the better tanks, and employ the earth taken out to fill in the smaller holes around. To persevere in gradually obliterating all filthy pits and tanks. (11) To fill up the tank behind the Maharajah's palace in the manner recommended by me. (12) To see that the conservancy establishment is properly supervised, and to require the overseers to take the full amount of work from the establishment placed under their charge. (13) To have all the lanes and by-paths swept daily, and the sweepings regularly removed and fully utilised in filling up hollows and useless tanks. (14) To use wheel-barrows for the proper conservancy of the narrow lanes. (15) To provide barrel-carts for the removal of fluid kitchen refuse to the trenching ground for disposal. (16) To supply the municipal bullock shed with hydrant water for the use of the bullocks, and to consider the advisability of putting up a tap in every bullock shed in order that the sheds and drains might be easily cleaned out. (17) To provide more public latrines at convenient places, and reserve some of them and two or three of the existing ones for the exclusive use of females. (18) To have the gumlah-, the drains, and the walls of the public latrines up to three feet from the floor tarred at least twice a month. (19) To introduce and properly carry out the dry-earth system in all the public latrines during the cold and hot seasons, even if impracticable in the rains. (20) To take steps to put down promiscuous defocation, and to require the police, under section 365 of the Municipal Act, to discharge this part of their duty more actively than heretofore, and systematically bring up offenders under the municipal laws for punishment. (21) To put up urinals in the crowded portions of the town, particularly near the bazars (22) To look out for some sites for trenching purposes convenient to the more distant latrines. (23) To take early steps for introducing Part IX of the Municipal Act. (24) To require the owners. of the private markets to provide these places with filtered water-service, and to see that their conservancy is properly attended to and the drains kept free and effective. (25) To lay on hydrant water to the meat-markets at Peerbaharam and Ranigunge. (26) To establish a municipal slaughter-house on a small scale provided with a water-supply and other conveniences, and to prohibit the killing of cattle at any other place. Also to have a proper place of their own instead of the Kalisthans which are very filthy, charge fees for its use, and allow no killing of goats anywhere else within the municipality. (27) To have the old burial ground for the Mahomedans planted with trees, and to abandon the Kerbala burial-ground, as the river water is likely to be contaminated. (28) To see that the graves are dug sufficiently deep to allow of the chapper being at least four feet from the surface of the ground. (29) To fully utilise the provisions of the compulsory Vaccination Act, particularly its penal clauses, and to place the town in a thorough state of protection. (30) To take registration into their own hands and relieve the police of this part of their duty, and with greater attention to the subject to which greater accuracy in results. obtain greater accuracy in results.

Action taken on the suggestions.—It was reported—(1) That the Secretary will be directed to see that the overseers take the full amount of work from the conservancy establishment placed under their charge. (2) That all the lanes and by-paths are being swept daily and the sweepings used in filling in useless hollows. (3) That the suggestion regarding the provision of barrel-carts for the removal of the fluid kitchen-refuse to the trenching ground for disposal will be attended to along with the question of general scheme of drainage improvement of the town. (4) That as the supply of filtered water is not adequate for the requirements of the residents of the town, the Commissioners with justice cannot connect their bull-sheds with

the water pipes antil all the house connection applications have been complied with; besides a big tank within the bull-shed enclosures was re-excavated last year, and its water is clean enough for use of the bullocks, and the bulls have not been found to suffer in health by using the tank water. (5) That the remaining suggestions will be carried out when funds will allow.

Soory Town.—Inspected in January 1886.—The sanitary arrangements of this town were not satisfactory. The drainage and the conservancy arrangements were very defective and in some instances objectionable, and the water-supply was insufficient in quantity and of the very worst quality. The whole place is riddled with pits and hollows full of foul water, constituting a standing menace to the public health. On the date of my visit there were, however, evidences to show that the Commissioners were trying to remedy some of the defects.

The suggestion's were—(1) To take immediate steps to prevent the diminution of the income in future. (2) To devote year after year the greater portion of the amount which has become available by the municipality having been relieved of police charges, as well as a fair share of its remaining income, for rectifying the many grave sanitary defects which yet exist (3) To fully utilise the sections of Part VI of the Municipal Act which relate to building regulations. (4) To bring into force a code of bye-laws framed under the above-named Act. (5) To make persevering endeavours to have all the pits and hollows gradually filled up, and to employ for the purpose the spare earth which becomes available when new tanks are dug or old ones re-excavated. (6) To strictly enforce section 232 of the Municipal Act, and prevent the making of excavations for the purpose of taking earth, &c., therefrom or of storing rubbish or other offensive matter therein. (7) To provide all masonry structures over drains with man-holes at every 6 or 8 feet at the expense of the owners, and to permit no new erections except what are sufficient for entrance to and exit from houses and shops. (8) To gradually improve the drainage, parts being dealt with as funds permit, and to try to better the condition of the house drains. (9) To keep the area of supply of the kutcherry to better the condition of the house drains. (9) To keep the area of supply of the kutcherry tank scrupulously clean. (10) To revolutionise the water-supply of the town and devote for the purpose as much of the funds as possible. (11) To induce the rich owners of some of the tanks to have them re-excavated, protected from pollution, and set apart for drinking. (12) To sink more wells at suitable places, reserve them exclusively for drinking, and provide them with pumps or buckets and chains with pulleys for raising water; also to have the wells sunk deep to get to the water-bearing stratum. (13) To adequately strengthen the conservancy establishment and to increase the number of carts. (14) To provide wheel-barrows for the conservancy of the narrow lanes. (15) To judiciously employ street-sweepings, &c., in filling up filthy holes and ponds situated well away from dwelling-houses taking up only so many of the pits at a time as can be dealt with within a short space of time. (16) To require the people to bring out all house refuse and deposit it on the roadside at a stated hour for removal to bring out all house refuse and deposit it on the roadside at a stated hour for removal by the conservancy carts. (17) Not to permit the accumulation of cow and cattle ordure within compounds of houses, and to see that it is either converted into cakes for fuel or deposited in the fields as manure. (18) To construct a few more public latrines at convenient places, and to exclusively reserve some of them for the use of females. (19) To provide houses for the methers near the latrines. (20) To properly carry out the dry-earth system during the cold and hot seasons at least. (21) To make persovering endeavours to put down promiscuous defeccation, and to require the police, under section 365 of the Municipal Act, to discharge this part of their duty more satisfactorily than the harm hitherto done. (22) To take early steps to fully utilise, after their introduction, the salutary provisions of Part 1X of the above-named Act. (23) Not to allow the night-soil from the private privies to be thrown on the surface to dry up, but to have it trenched in the grounds specially set apart for the purpose. Also to warn the private methers against disposing of it otherwise. (24) To cultivate the trenching grounds. (25) To consider the advisability of providing suitable stalls for the sale of meat, and making arrangements for the regular removal of the bones, &c. (26) To fully make use of the Compulsory Vaccination Act, particularly its penal clauses, and to place the town in a state of thorough protection. (27) To try to the utmost to place registration on a satisfactory footing. (28) To require the overseer, the tax collectors, &c, to detect and report for punishment all omissions of the provisions of the compulsory law; also to have the persons charged with the duty of reporting births and deaths punished, under section 6 of the Compulsory Registration Act, whenever they omit to report the events.

Action taken on the suggestions.—(1) It was agreed to issue a notice, under section 232 of the Municipal Act, in regard to digging holes, &c. (2) The sinking of two more wells has been agreed upon. (3) For the better supervision of the sweepers, provision has been made in the budget for an additional peon, as also for the construction of huts for the sweepers near the latrines. (4) As regards private privies, a sub-committee has been appointed to report on the feasibility of the municipality taking the management of private privies in Rati mobullah and Khattah mobullah.

Berhampore Town,—Inspected in January 1886.—I was glad to see improvement since I last visited the town, and evidence of interest taken in sanitary matters by the Commissioners. The health status of the place was on the whole, no doubt, better than formerly, but could not be regarded as satisfactory. There were still many serious sanitary defects, notably under the head of drainage, calling for early rectification, and parts of the town, particularly the localities round the Bistupur bheel, were in a very insanitary state. There are, moreover, innumerable filthy pits and excavations seething with decaying vegetation, which must tend to affect health very injuriously.

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The suggestions were—(1) To devote annually a larger proportion than 6.23 per cent. of the income for rectifying the grave sanitary defects that yet exist and placing all parts of the town on a sound sanitary footing. (2) To take early steps to bring into operation Part IX of the Municipal Act. (3) To see that the narrow lanes are not turned into repositories of filth of the neighbourhood, and not to lose opportunities on the occasion of fires, &c., to widen them. (4) To connect as many of the numerous holes and pits as possible with one another, and ultimately with the channel which is now being excavated from the Khagra sluice to drain the Bistupur bheel. (5) To consider the advisability of requiring the owners of some of the smaller holes to have them filled up with sand from the river bed in the dry season. of the smaller holes to have them filled up with sand from the river bed in the dry season. (6) To make sustained efforts to fill up all filthy holes and excavations, and to employ for the purpose street sweepings and the solid refuse from houses when the holes are at some distance from the dwelling-houses, limiting, however, the operation to only so many of these at a time as can be dealt with within a short period. (7) Not to permit brick-making within the limits of the municipality. (8) To undertake and gradually complete an efficient system of surface drainage, making, however, some progress every year and attending to the badly-drained portions of the town first. (9) To carry out, as funds permit, the scheme drawn up by the Executive Engineer, Mr. P. B. Roberts, for improving the condition of the Bistupur bheel, one part being done one year, and the other the next, till a perfect system is complete. (10) To regularly supervise and empty the cess-bools inside the houses in which Bistupur bheel, one part being done one year, and the other the next, till a perfect system is complete. (10) To regularly supervise and empty the cess-pools inside the houses in which house sewage is collected, and not to allow it and cook-room fluids to sink into the soil or simply evaporate on the premises. (11) To require the owners of foul tanks to maintain them in proper order or have them filled up. (12) To supply the municipal wells with buckets and chains with pulleys for raising water, and prohibit the dipping of private vessels into them. (13) To put a stop to the practice of using the banks of the river for purposes of nature. Also to move the Magistrate to call the attention of the police, under section 365 of the Municipal Act, to this part of their duty. (14) To sufficiently strengthen the conservancy establishment and to increase the number of carts. (15) To provide barrel-carts for the removal of the fluid house and kitchen refuse to the trenching ground for disposal. (16 To provide more public latrines at convenient places, and set apart one or two of them and a few of the existing ones for the exclusive use of females. (17) To have the latrines intended for females attended to by methranis only. (18) To properly carry two of them and a few of the existing ones for the exclusive use of females. (17) To have the latrines intended for females attended to by methranis only. (18) To properly carry out the dry-earth system in all the public latrines during the cold and hot seasons, if found impracticable in the rains. (19) To make persevering endeavours to put down promiseuous defocation. 20) To see whether the trenching coolies are deficient in number or not, and to make arrangements for cultivating the trenching grounds. (21) To require the owner of the new market to provide it with proper pathways and means of drainage, and those of the other two markets to improve the drainage and take steps generally for bettering the condition of the places. (22) To enquire carefully whether any of the graveyards are crowded or not, and if any of them should be found overcrowded, to close them at once, probibit further interments in thom, and plant the grounds with trees. (23) To fully make use hibit further interments in them, and plant the grounds with trees. (23) To fully make use of the Compulsory Vaccination Act, particularly of its penal provisions. (24) To fully utilise the provisions of the Compulsory Registration Act. (25) To introduce the system of registering births, keep separate records of the events, and regularly furnish this office with returns along with the mortuary statements. Also to induce the midwives to give

with returns along with the mortuary statements. Also to induce the midwives to give information of all births at which they attend.

Action taken on the suggestions—(1) The conservancy establishment has been strengthened and the number of carts increased. (2) Arrangements have been made for providing at least two barrel-carts for removing fluid house and kitchen refuse. (3) Public latrines have been set apart for the separate use of males and females respectively, and the dry-earth system is being properly carried out. (4) Steps have been taken to prevent promiscuous defocation. (5) The trenching grounds are being cultivated. (6) The owners of the two private markets, the drainage of which is defective, have been requested to rectify the defect and generally improve the condition of these places. (7) The Khagra sluice channel has and generally improve the condition of these places. (7) The Khagra sluice channel has been repaired under the supervision of the Executive Engineer at a cost of about Rs. 200. (8) Filthy pits and holes are now being filled up with street sweepings and the solid refuse

from houses.

City Murshedabad Municipality—Inspected in January 1886.—The sanitary condition of this town had much advanced since last inspection and the Commissioners seemed greatly interested in improving it. Many improvements were found to have been effected under the several heads of sanitation, but much had yet to be done to place the town on a satisfactory sanitary footing. The drainage arrangements were defective, and those relating

ratisfactory sanitary footing. The drainage arrangements were defective, and those relating to the interment of the dead were very unsatisfactory and in some cases objectionable, and numerous filthy pits and hollows had still to be dealt with.

The suggestions were—(1) To take steps generally to guard against the recurrence of the falling off in the revenue. (2) To devote annually a fair and legitimate share of the income for rectifying the sanitary defects which yet exist and placing the town on a thoroughly sound sanitary footing (3) To consider carefully the questions of metalling a certain length of the kutcha roads every year and of gradually increasing the length of mileage lighted. (4) To fill in as so n as possible the deep holes at the sides of the new road from Mohimapur to Baluchur with street sweepings, (5) To consider the expediency of setting apart a small portion of the income for filling in every year some of the filthy hollows and excavations, using mud from the river bed in the dry season. (6) To prohibit the making of excavations for the purpose of taking earth, &c., therefrom, or of storing rubbish or other of excavations for the purpose of taking earth, &c., therefrom, or of storing rubbish or other

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(7) To carry on the Baluchur section of the drainage scheme offensive matter therein. before long; also to divert the drains as far as practicable from the tanks, and to make arrangements for connecting all house-drains with public drains. (8) To substitute in the crowded localities pucca shallow saucer-shaped side-drains for the deep kutcha ones. (9) To have the pucca drains regularly flushed and the accumulation of filth in them removed, and to permit no sludgy collections near home, nor in street drains or under cultures. (10) To supply the we'lls reserved for drinking with pumps or buckets and chains with pulleys for raising water, and to prohibit the indiscriminate dipping of vessels into them. (11) To provide barrel-carts for the removal of fluid house refuse to the trenching grounds for disposal. (12) To have the rubbish, which was found accumulated in the part of Azimgunge, south of the rail-way, removed and utilised in filling up foul pits and holes. (13) To set apart three or four of the existing public latrines for the exclusive use of females, and to have them attended to by methranis only. (14) To provide all the kutcha privies with plinths pucca throughout. by methranis only. (14) To provide all the kutcha privies with plints pucca throughout. (15) To close all the sundasses, and require their owners to construct surface privies in their stead. (16) To put up at convenient places a few urinals made of corrugated iron. (17) To make persevering endeavours to put down promiscuous defecation. (18) To bring into force Part IX of the Municipal Act on an early date. (19) To cultivate the trenching ground with maize, jute, &c., during the rains, and with English vegetables and mustard, &c., during the winter. (20) To require the owners of the private markets besides that of Azimgunge to gradually provide their respective ones with pucca drains and floors. (21) To consider the advisability of establishing a Municipal slaughter-house with proper drainage, water supply, and other conveniences, and to prohibit the killing of cattle at any other water supply, and other conveniences, and to prohibit the killing of cattle at any other place. Also not to allow any but healthy cattle to be killed for food consumption. (22) To establish beyond the limits of the municipality one or two public burial grounds for the Mahomedans, another for the Boistobs, and to strictly prohibit burials within house enclosures. Manomedans, another for the Boistons, and to strictly promine burials within house enclosures. (23) To have the graves in the new grounds to be provided dug in lines with fixed spaces between each grave and each row of graves. (24) To see that in the case of the Mahomedans the bodies are buried at a sufficient depth to allow of the *chupper* being placed at least 4 feet below the surface of the ground. (25) To close the graveyard at Jaffergunge, prohibit further interments in it, and plant the ground with trees. (26) To try to obtain accuracy in registration with continued attention to the subject.

Action taken on the suggestions:—(1) A sub-committee has been appointed to give effect as far as possible to the suggestions. (2) The Baluchur drainage works have been taken in hand and are in progress. (3) Rubbish accumulated in Azimgungo to the south of the railway has been removed. (4) Almost all the kutcha latrines have been provided with pucca plinths. (5) Latrines have been exclusively set apart for females, and these are being attended to by methranis only. (6) Sundasses have been prohibited, and none are reported to be in existence. (7) Strenuous endeavours are being made to put down promiscuous defectation. (8) A now burial ground is being opened.

English Bazar Town.—Inspected in January 1886.—This town was in a bad condition, generally unclean with rubbish near houses, and pucca drains insufficiently attended to, and studded with foul pits and water-holes. The arrangements under the heads of drainage, conservancy, and disposal of the dead were very defective, and portions of the

town, such as Mirarchack, Hyderpur, and Sakoparah, were in a very insanitary state. On the whole, this town required very urgent attention at the hands of the Commissioners.

The suggestions were—(1) To take stars to prevent the recurrence of the diminution of income. (2) To devote annually the greate portion of the amount, over Rs. 2,000, which now accrues to the municipality by its having been relieved of police charges, together with an equitable share of the remaining income for improving the sanitation of the town. Also to divert some of the money given to schools to more urgent needs. (3) To gradually metal the kutcha roads, a certain length of them being taken up every year. (4) To properly attend to the conservancy of the narrow lanes, and to take opportunity on the occasion of fires, &c., to widen them. (5) To strictly enforce section 232 of the Municipal Act, and put a stop to the making of further excavations. (6) To make persevering endeavours to fill up all pits and hollows, and fully utilize for this purpose street sweepings and the solid refuse from houses when the pits are at a distance from dwelling places, limiting, however, the operation to only so many of them as can be dealt with within a short space of time. (7) To keep the existing drains quite free and effective, and to gradually improve their levels. Also not to allow the pucca drains to be blocked with rubbish and other offensive matter (8) To require the owners of private tanks to maintain them in proper order or have them filled up. (9) To have such of the tanks as are worth preserving dewatered and cleaned out by their owners. (10) To keep in view the necessity of setting aside yearly a certain part of the municipal revenue to fill in offensive tanks with earth from the river bed. (11) To erect masonry parapets and platforms around the mouths of the wells which are used for drinking purposes, and to have their tops covered with wooden jaffries. (12) To stop at once the practice of resorting to the bank of the river for defeccation. (13) To have the conservancy establishment adequately strengthened and the number of carts increased. (14) To provide wheel-barrows for the conservancy of the narrow lanes. (15) To require the people to bring out all house-rubbish, &c., and deposit them at the stated hour on the roadside for removal by the conservancy carts. (16) To have the accumulation of rubbish near houses and in pucca drains removed and advantageously employed in filling up foul pits and excavations. (17) To drains removed and advantageously employed in filling up foul pits and excavations. (17) To gradually introduce the iron latrines called Hornbury's patent and sold by Messrs. Burn & Company of Calcutta. (18) To have the gumlahs used in the existing latrines

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tarred at least twice a month. (19) To properly carry out the dry-earth system in the public latrines during the cold and hot weather. (20) To endeavour to put down promiscuous defcecation. (21) To induce those who can afford the cost of construction to provide for themselves surface privies which can be cleaned easily. (22) To take some action to find out and suppress the well privies, their owners being required to build privies on an approved plan. (23) To establish one or two trenching grounds at some convenient place, and have the night-soil from all the public and private privies carried there for disposal. Also to conduct the trenching system properly. (24) To immediately stop the present reprehensible mode of disposing of night-soil from the private privies, and pending the opening of the trenching grounds recommended to allow the private methers to bury night-soil in the holes which receive the contents of the public privies. (25) To introduce Part IX of the Municipal Act on an early date. (26) To require the owners of the private markets to provide them with good drains and proper path-ways, and take steps generally to improve their condition. (27) To prohibit at once interments within steps generally to improve their condition. (27) To prohibit at once interments within house enclosures (24) To establish a public graveyard at some convenient place beyond the limits of the Municipality, and have the bodies buried in it in regular lines with fixed

the limits of the Municipality, and have the bodies buriedain it in regular lines with fixed distances between each grave and each row of graves. Also to have the graves dug sufficiently deep, so that the chupper may be at least four feet below the surface of the ground. (29) To fully utilise the provisions of the Compulsory Registration Act, and adopt measures generally to secure accuracy in registration.

Action taken on the suggestions.—(1) The suggestions regarding the allotment of an equitable share of the income for improving the sanitation of the town, and the diversion of some of the money given to schools to more urgent needs, will be taken into consideration at the time of the preparation of the budget estimate for 18.7-88. (2) The existing kutcha roads will be gradually metalled as funds permit. (3) Pits and hollows are being gradually filled up with street sweepings, &c (4) The drains are now being kept in proper order, and free from obstacles, and the conservancy establishment has been strictly warned to see to the cleanliness of the drains. (5) Proper steps are being taken for keeping the private tanks clean, and provision will be made in the next budget for filling in some of those that are offensive. (6) Defocation on the bank of the river has been prohibited. (7) The public has been informed by beat of drum to bring out and deposit on the roadside all house rubbish between the hours of 1 A.M. and 8 A.M. for removal by the conservancy carts. (8) Steps have been taken to have the lanes and by-paths cleaned twice a week. (9) Two iron latrines with one seat have been indented for from Bankipore. (10) The gumlahs used in the latrines are being tarred twice a month. (11) The dry-earth system is being carried out in the public latrines. (12) Those who can afford the cost of construction are being induced to provide proper surface privies for themselves. (13) Steps are being taken to improve the condition of the private market. (14) Endeavours are being made for establishing a public graveyard. (15) Th being made for establishing a public graveyard. (15) The registration work is being

properly carried on.

Sahebgunge Town.—Inspected in January 1886.—The sanitary arrangements of this Municipality were in several respects satisfactory. Many improvements were found to have been effected since it was last visited, the chief among them being the extension of the pucea drains, and the introduction and utilization of the provisions contained in Part IX of the Municipal Act. In fact it was evident that the Commissioners were taking great interest in the sanitary welfare of the town. There were, however, still many defects which required

early attention.

The suggestions were—(1) To continue to allot every year a fair share of the municipal income for placing all parts of the town on a sound sanitary footing. (2) To strictly enforce, after Part VI of the Act comes into operation, those sections of it which relate to building regulations. (3) To provide as soon as possible one or two pucca wells in Dosadpara, allow no more pits to be dug there, and deal with the drainage of the busti as funds permit. (4) To construct a good through Coolyparah, care being taken to open out the crowded portion of the busti. (5) To divert the system of pucca drains to be extended from emptying into tanks, and to allow none but the drain from the European quarter to discharge into the series of tauks running north and south through the native town. (6) To require the head clerk of the Traffic Department to demolish the large platform he has erected over the municipal drain, and provide himself in its stead with a suitable entrance to his house. (7) To have the municipal tank re-excavated, properly protected from pollution, and set apart for drinking. (8) To undertake the gradual obliteration of the filthy private tanks, and to provide a central channel through the series of large tanks running north and south banked up on each side, and have the hollows left outside the banks filled in with river-mud and sand as funds permit, (9) To have the wells sunk deep to get to the water-bearing stratum.

(10) To at once stop the practice of resorting to the banks of the river for defeccation.

(11) To sufficiently strengthen the conservancy establishment. (2) To construct more public latrines at convenient places and reserve a few of them for the exclusive use of females. Also to introduce the corrugated iron latrines called Hornbury's patent and sold by Messrs. Burn and Company of Calcutta. (13) To have the latrines for females attended to by methranis only. (14) To have the receptacles, the drains, and the walls of the public latrines up to three feet from the floor tarred twice a month. (15) To keep the public latrines scrupulously clean and sweet. (16) With the gradual increase in public latrine accommodation to make persevering endeavours to put down promiseuous defectation. (17) To require the owners of such of the private privies as are badly constructed to provide themselves with properly

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constructed sufface privies. (18) To establish trenching grounds at the outskirt of the town, carry on the trenching system properly, and have the grounds cultivated. (19) To provide the slaughter-house proposed to be constructed with proper drainage, water-supply, and other conveniences, and to keep it scrupulously clean and tidy. Also to prohibit, after it is established, the killing of cattle at any other place. (20) To strictly enforce burials in the Mahomedan cemetery being in regular lines with fixed distances between each grave and each row of graves. (21) To fully utilise the Compulsory Vaccination Act, particularly the penal provisions of it. Also to take steps to gratify in future the wishes of the people in respect to their being vaccinated by persons known to them. (22) To take early steps to bring the Compulsory Registration Act into operation, and place registration on a satisfactory footing.

Action taken on the suggestions.—(1) The Coolypara-road, 2,100 feet long, has been metalled with soling of stone and surface of kunker. (2) The Institute road is being metalled with kunker, and more kunker is being collected for metalling other roads. (3) Provision will be made in the next year's budget for making one or two pucca wells in Dosadpara. (4) The old pits in the above busti are being filled up, and the creation of new ones has been prohibited. (5) The Coolypara is being kept clean, and one or two cross lanes will be opened through it. (6) Since the inspection of the town, 935 feet of pucca drain has been constructed and more will be provided as funds permit. (7) Small cess-pools and tanks are being filled up. (8) The cess-pool connected with the latrine near the plunge bath will be altered as soon as practicable. (9) Three more methranis have been engaged for cleaning private latrines. (10) Two five-seated latrines—one for males and the other for females—have been provided. (11) The receptacles, drains, and the walls of the public latrines are being regularly tarred. (12) The night-soil is being buried in shallow trenches. (13) As more public latrines are opened, steps will be taken to stop promiscuous defocation. (14) A new slaughter-house has been built at the foot of the hill, and the killing of cattle elsewhere has been prohibited. (15) The Mahomedans have been made to bury in regular lines. (16) The Compulsory Vaccination Act is being properly worked, and the people are gradually beginning to appreciate vaccination. (17) Births and deaths are now being registered.

Old Maldah Town.—Inspected in January 1886.—This town was found in a very bad state. Excepting the improvement in the central road, called the Survery road, nothing had been done to improve its sanitation since it was last inspected two years before. It was full of jungle and of deep hollows, out of which the roads and building sites had been raised. The drainage was very defective, and the conservancy arrangements totally incommensurate with the needs of the town. Properly speaking, there was no conservancy in Maldah. The arrangements under the head of disposal of the dead were also very unsatisfactory. All these tended to make the place very unhealthy. The Commissioners did not appear to take such active interest in the sanitary welfare of the town as could be desired. The poverty of the Municipality had, however, much to do with the wretched state of things described above.

The suggestions were—(1) To devote annually a fair share of the municipal revenue towards improving the sanitary condition of the town. (2) To consider the advisability of raising the taxes and of devising other means for increasing the income of the Municipality. (3) To take immediate steps to introduce Parts VI and IX of the Municipal Act. (4) To bring into operation a code of bye-laws framed under the above-named enactment. (5) To properly attend to the conservancy of the narrow roads. (6) To try to introduce river water into the deep hollows and excavations about the town. (7) To require owners and occupiers of houses to keep their premises free from thick and noxious vegetation. (8) To direct their offerts for the present to keeping the drainage channels clear and free to act. and gradually improving their levels. (9) To prohibit further excavations in the drains for the purpose of taking earth, as well as throwing of rubbish into them. (10) To set apart the Babakkar tank for supply of drinking water only. (11) To induce the rich owners of some of the other tanks to have them re-dug, properly protected from pollution, and reserved solely for drinking and domestic purposes. Also to gradually fill up the filthy private tanks. (12) To at once prevent defeccation on the banks of the river. (13) To adequately strongthen the conservancy establishment, and increase the number of carts. (14) To require the people to bring out all house rubbish at a stated hour, and deposit it on the roadsides for removal by the conservancy estats. (15) To use street sweepings and the solid refuse from houses for filling in holes when they are at a distance from the houses, and not cast them here and there as convenient to the sweepers. (16) Not to allow cowdung, &c., to be accumulated within compounds of houses, but to have them either converted into cakes for fuel or deposited in the fileds outside the tewn. (17) To construct some public latrines at convenient places, and set apart one or two of them for the exclusive use of fema

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the Compulsory Vaccination Act. (24) To fully utilise the provisions of the Compulsory Registration Act, and place registration on a satisfactory footing. (25) To require the taxcollectors to detect and report for punishment all evasions of the requirements of the abovenamed enactment.

Action taken on the suggestions.—(1) Much of the jungle within municipal limits has been cleared. (2) The Mokatipur road has been metalled. (3) Many other roads have been repaired. (4) About 610 feet of pucca and over 3,000 feet of kutcha side-drains have been

constructed along various roads.

Purneah Town.—Inspected in January 1886.—Several improvements were observed to have been effected since the town was last inspected, but the sanitary arrangements were not yet satisfactory. There were many defects, particularly under the heads of watersupply and conservancy, which called for early attention. The town was moreover full of pits and hollows containing foul water, which must tend to affect health injuriously. The Commissioners, however, were not unmindful of the sanitary concerns of the

The suggestions were—(1) To devote annually a larger-proportion than 8.77 per cent. of the income to rectify the many sanitary defects which yet exist. (2) To introduce at an early date Parts VI and IX of the Municipal Act, if they are not already in force. (3) To fully utilise those sections of Part VI which relate to building regulations and prevent the irregular laying out and construction of houses. (4) To make persevering endeavours to fill up pits and hollows with street-sweepings, &c, when they are at a distance from the houses. Also to consider the advisability of setting apart a small portion of the municipal income for filling in every year some of the filthy holes and excavations with mud and sand from the river bed in the dry season. (5) Not to allow the drainage channels to get more blocked up with water-plants, and to have a few of them regularly cleaned every year. (6) To prohibit the erection of fishing weirs in drainage channels (7) To construct pueca shallow saucershaped side drains in crowded localities, and make provision for connecting the house drains with them (8) To set apart the Police tank, which is properly protected from pollution, for drinking only, and strictly prohibit bathing in it. (9) To require the owners of filthy tanks to maintain them in proper order. (10) To see that the protective brickwork round the mouths of the reserved wells is kept in good repair, and to have the ground around them properly sloped so as to allow the spill-water to run to the nearest drain (11) To adequately strengthen the conservancy establishment, and to increase the number of carts and bullocks. (12) To provide wheel-barrows for the conservancy of the narrow lanes and by-paths.

(13) To require the people to bring out all house rubbish, &c., and deposit them on the roadside at the appointed time for removal by the conservancy carts (14) To have the accumulation of rubbish at places removed at the cost of the owners, and utilised in filling up filthy pits and hollows. (15) To have all the streets swept daily, and the lanes and bypaths twice a week. (16) To set apart one or two of the existing public latrines for the exclusive use of females. (17) To have the latrines for females attended to by methranis only. (18) To make every endeavour to put down promiscuous defectation, and to require the police, under section 365 of the Municipal Act, to discharge this part of their duty more satisfactorily than heretofore. (19) To establish one or two trenching grounds beyond the limits of the Municipality, and to try to acquire cultivable land, if possible, for the purpose. Also to have all night-soil from both the public and private privies removed to these grounds for burial, and to strictly warn the private methers against disposing of it otherwise. (20) To carry on the trenching system properly, the trenches being dug in lines about one foot deep and one foot wide, and only 6 inches of night-soil put into them, the remainder being filled with earth. (21) To have the bodies buried in the graveyards not at random, but in lines with fixed distances between each grave and each row of graves, and to see that in the lines with fixed distances between each grave and each row of graves, and to see that in the case of the Mahomedans the graves are dug sufficiently deep, so that the chupper may be placed at least four feet below the surface of the ground and not one foot as at present. (22) To deal very cautiously with the question of permitting burials within enclosures of houses, and to generally refuse such permission. (23) To take steps to gradually reduce the number of private graveyards with a view to their extinction. (24) To have the old Christian burial ground near Line Bazar, which has been closed, planted with trees. (25) To have the clothes, pillows, &c., of the deceased burned along with the bodies. (26) To see that after the registration work is taken over from the hands of the police, better results are obtained.

Action taken on the suggestions.—It was reported (1) That more money was being allotted for sanitary improvements. (2) That steps had been taken to improve the Chandney Chowk. (3) That pits and hollows were being filled up, and the weeds and plants from the

Chowk. (3) That pits and hollows were being filled up, and the weeds and plants from the

water-channels cleared.

Bhagulpore Town.—Inspected in January 1886.—I inspected this town with the Chairman and the Civil Surgeon, and saw the new drainage-works at Shoojagunge, a good many latrines, several trenching grounds, the slaughter-house, and a Mahomedan burial-ground &c., &c., also the beginning of the new water-works under the care of the Public Works Department. Many improvements were seen to have been effected since the town was last visited, but there were yet many serious sanitary defects. The Commissioners, however, appeared to be fully alive to the wants of the town, and were evincing great interest in its sanitary welfare.

The suggestions were—(1) To devote annually a larger proportion than 9:10 per cent. of the income to rectify the sanitary defects that still exist and place all parts of the town on lxii

a sound sanitary footing. (2) To strictly enforce the sections of Part VI of the Municipal Act, which relate to building regulations, and prevent the crowding together of huts without Act, which relate to building regulations, and prevent the crowding together of huts without proper provision for ventilation or passages between them for admitting conservancy carts.

(3) To make persevering endeavours to fill up holes with street-sweepings, &c., when they are at a distance from the homesteads. (4) To consider the advisability of annually setting apart a small portion of the municipal revenue for filling in filthy holes and excavations with mud and sand from the bed of the river during the dry season. (5) To strictly apply section 232 of the Municipal Act and prevent the making of excavations for the purpose of taking earth therefrom. (6) Not to permit brick-making within the limits of the Municipality. (7) To let house water from baths and kitchens pass into the pucca drains wherever they are complete. (8) To continue to provide pucca drains throughout Soojagunge and other crowded localities. (9) To spare no means by which money can be obtained by going to Government or getting a loan on any reasonable terms and complete the water-works before many months are over. (10) To have all the principal streets swept daily and the lanes and many months are over. (10) To have all the principal streets swept daily and the lanes and by-paths at least twice a week, and the sweepings regularly removed by the conservancy carts. (11) To provide wheel-barrows for the proper conservancy of the narrow lanes. (12) To increase the number of carts for the removal of fluid refuse from houses, and to properly supervise the cleaning of the vats into which the refuse is collected until such time as the refuse can be discharged into pucca drains. (13) To gradually replace the mat latrines by properly constructed pucca structures, or to supply them with pucca plinths, or to get the iron ones called Hornbury's patent and sold by Messrs Burn & Company of Calcutta. (14) To have the gumlahs, the drains, and the walls of the public latrines up to three feet from the floor tarred twice a month. (15) To put up public urinals in the crowded thoroughfares. (16) have the gumians, the drains, and the wans of the public latrines up to three feet from the hoor tarred twice a month. (15) To put up public urinals in the crowded thoroughfares. (16) To make endeavours to put down promiscuous defecation, specially among ruined houses or enclosures in inhabited places. (17) To extend Part 1X of the Municipal Act to the whole town. (18) To carry out the trenching system properly, the trenches being dug in lines one foot deep and one foot wide, and to cultivate the parts of the ground which are well manured. (19) To require the owner of the market in mobulla Mojaidpore to pave the floor of the whole place instead of that of detached portions of it. (20) 'After the water-works are completed to lay on hydrant water to the municipal slaughter-houses. (21) To prohibit further interments in the public graveyard at Moolla Chuck, to establish another burial ground near it, and to have the former planted with trees. (22) To have the bodies buried deep, the vault being placed at least four feet below the surface of the ground. (23) To at once stop the practice of throwing partially cremated bodies into the river, insist upon complete oremation in every case, and require the peon and the mohurir who are respectively attached to the burning ghâts to see to this. (24) To have the clothes, &c., of the dead burnt along with the body in every case, and prevent the domes from taking these away and offering them for sale in the bazar. (25) Not to permit any longer the casting of the Hindu pauper dead into the river uncremated, but to have them either burned or buried at the cost of the Municipality. (26) To fully utilise the provisious of the Compulsory Vaccination Act in all particulars, and to ask the Civil Surgeon, who is also Superintendent of Vaccination, to exercise the full powers given him by the Act (27) To specially appoint a man to detect all evasions of the requirements of the Compulsory Registration Act and systematically bring up the offenders for punishment, and watch the cases whi bring up the offenders for punishment, and watch the cases whilst pending in courts of justice.

(28) To require the tax-collectors and the overseers to report births and deaths as a check on voluntary registration and the police reports. (29) To induce the midwives to give information of all births at which they attra

Action taken on the suggestions. — A few of the suggestions have been adopted, and steps are being taken to give effect to some of the others.

Monghyr Town.—Inspected in January 1886.—With the exception of strengthening the conservancy establishment and introducing Part IX of the Municipal Act, no other steps appeared to have been taken since last inspection to improve the sanitation of the town. The drainage arrangements were very bad, and the supply of water for drinking and other domestic purposes not quite sufficient for the requirements of the whole town. There were

also many other sanitary defects which demanded early attention.

The suggestions were—(1) To more actively look after the sanitation of this important town and make a more liberal allotment than only 2.42 per cent. of the income to rectify the defects that yet exist. (2) To bring into operation Part X of the Municipal Act. (3) To have the sanitary clauses of the law administered with the desired activity and closeness. (4) To pay serious attention towards dealing with the large number of encroachments upon roads and drains. (5) To raise a loan or utilise a portion of the amount which has been realised by the sale of certain landed property, and quickly carry out drainage—or after the careful preparation of a schema to take it up year by year in parts, and thus have the town gradually drained. (6) To prosecute persons putting rubbish in drains. (7) To try to improve the condition of the house drains. (8) To have the mouths of the public wells properly protected from pollution, supply the wells with pumps or buckets and chains with pulleys for raising water, and prohibit the dipping of private vessels into them. (9) As far as practicable, to put a stop to the practice of throwing corpess and carcasses into the river. (10) To further strengthen the conservancy establishment and increase the number of carts. (11) To see that the overseers actively supervise the staff under their orders, and to have the amount of work which each man has to perform defined, and that work taken from him in full. (12) To require the people to bring out at the stated hour all house-rubbish and put it on the roadside for removal by the conservancy carts. (12) To have the drains

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included in surface cleansing and kept permanently clean. (14) To provide wheel-barrows for the conservancy of the narrow lanes (15) To provide more barrel-carts for the removal of fluid house and kitchen refuse to the trenching grounds for disposal. (16) To keep the public latrines and their surroundings scrupulously clean and sweet. (17) To make persevering endeavours to put down promiscuous defectation. Also to require the police, under section 365 of the Municipal Act, to discharge their duty in this respect more actively than heretofore. (18) To extend Part IX of the Municipal Act to the whole town, and have its provisions carefully and actively administered. (19) To require the farmer of the municipal market to keep it properly clean and tidy. (20) To consider the expediency of erecting a shelter at the burning ghât for persons bringing bodies for cremation, and of appointing a contractor who would engage to keep a stock of fuel in hand at the ghât for sale for fixed prices. (21) To have the corpses of prisoners and Hindu paupers cremated at the cost of the Municipality, and not cast into the river as at present, and to require the domes in charge of the burning and not east into the river as at present, and to require the domes in charge of the burning ground to see that in every other case the bodies are completely cremated. (22) To more fully and carefully utilise the provisions of the Compulsory Registration Act. (23) To ask the registrar to go round the various wards, alternately, visiting them for the purpose of detecting evasions of the provisions of the above law. (24) To require the tax-collectors and the overseers to report births and deaths as a check on the police reports and valuations are sintentian. (25) To induce the midwives to give identity of all higher which voluntary registration. (25) To induce the midwives to give information of all births which they attend. (26) To have the persons appointed to report births and deaths punished under section 6 of the Compulsory Registration Act, whenever they fail to do so.

Action taken on the suggestions.—(1) Two additional carts with the usual complement of methers, viz., two for each cart, will be employed for removing street-sweepings. (2) Wheel-barrows will be provided for cleaning lanes inaccessible to carts (3) Six barrel-carts have been purchased, and they are in uso (4) Steps have been taken to keep the surroundings of the public latrines clean, and the attention of the District Superintendent of Police has been drawn to the subject of putting down promiseuous defectation. (5) The edges of the well mouths will be raised to prevent spill water falling back into the well.

Jamalpur Town—Inspected in January 1886.—Although several improvements were seen to have been effected since the town was last visited, its sanitation was far from being satisfactory. There were many special conditions of the town injuriously affecting health, such as dirty excavations, bad drainage, foul cess-pools, bad water, &c. Almost all the busties were in a very insanitary state, and decaying vegetation was very great in them. Nothing had been done by the Commissioners to improve the condition of the outlying village of Rampore, which appeared to have been only included within the town for purposes

village of Rampore, which appeared to have been only included within the town for purposes of taxation. I was, however, glad to notice that the Commissioners were aware of the wants of the town, and were trying to gradually remove them.

The suggestions were—(1) To expend annually a much larger share than only 6 38 per cent. of the income for rectifying the grave sanitary defects that yet exist and placing this important town on a sound sanitary footing. (2) To get the contribution from the Railway Company considerably increased. (3) To fully utilise the sections of Part VI of the Municipal Act, which relate to building regulations, and provent the crowding together of huts without proper drainage or facilities for scavengering. (4) To strictly enforce section 232 of the above Act, and finally put a stop to the making of further excavations. (5) To make persevering endeavours to gradually fill up all the pits and hollows, and to consider the advisability of converting some of the larger excavations into tanks, and of utilising the earth which would then be available for filling in some of the smaller holes around. (6) To construct a good pucca road through the village of Doka, care being taken to open out the crowded portions of it; also to adopt measures generally for improving to open out the crowded portions of it; also to adopt measures generally for improving the sanitary condition of all the busties. (7) To improve the levels of the two nullahs in Jehangira which carry off hill water. (8) To prevent in future the construction of platforms over drains, and to generally refuse permission to build such structures. (9) To have the two properly surveyed, to ascertain the levels according to which drains can be constructed. and to undertake an efficient system of drainage, and carry out the project gradually. (10) To have, as far as practicable, the kutcha deep side-drains converted into pucca shallow saucerhave, as far as practicable, the kutcha deep side-drains converted into pucca shallow studer-shaped ones. (11) To see that the private house drains have pucca connections with the public drains wherever the latter are pucca. (12) To prevent the drainage of the public latrine in the European quarter from finding its way into the municipal tank when floods come down from the water-fall. (13) To have the public wells sunk deep to get to the water-bearing stratum, and to keep their surroundings scrupulously clean. (14) To provide the public wells with buckets and chains with pulleys for raising water, and prohibit the dipping of private vessels into them. (15) To provide wheel-barrows for the proper conservancy of the narrow lanes. (16) Not to employ street sweepings, &c., in filling up excavations and hollows unless they are at a good distance from the houses. (17) To require the owners of cow and cattle sheds to keep them in proper order. (18) In providing latrines in future, to have those intended for females quite apart from the male latrines being situated in different enclosures with different approaches. (19) To have the latrines for females attended to by methanis only. (20) To make persevering endeavours to put down promiscuous defectation. (24) To have Part IX of the Municipal Act brought into operation and properly worked. (22) To close as soon as possible the private burial-grounds for the Mahomedans as well as that for the other races, and to plant them with rapidly-growing trees. (23) To see that bodies are buried in the new grounds in lines previously drawn, with fixed intervals between each grave and each row of graves. (24) In the case of the Mahomedans, to cause the graves to be dug

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sufficiently deep to allow of the chapper being placed at least four feet, and not one foot as at present, below the ground surface. (25) To put a stop to the practice of throwing the Hindu and Mahomedan pauper, &c, dead into the hill stream called Dakra nullah, and to have the bodies either cremated or buried at municipal expense. (26) To provide the cooly lines with an ample supply of water, and to construct a latrine near the depots; also to have these places efficiently surface-drained, and to properly look after their conservancy. (27) To fully utilise the provisions of the Compulsory Vaccination Act. (28) To have the Compulsory Registration Act efficiently worked, specially with reference to its penal clauses. (29) To require the municipal servants, such as tax-collectors, overseers, &c., to report births and deaths as a check on the police reports and voluntary registration. (30) To require the registrar specially appointed for the purpose to go round some of the wards daily to detect all evasions of the provisions of the compulsory law. (31) To try to induce all midwives to report the births which they attend.

Action taken on the suggestions.—It was reported—(1) That measures were being taken to strictly enforce the building regulations, to deal with encroachments and platforms over drains, and to prevent the making of excavations. (2) That a pucca well and a kutcha road had been constructed in village Rampore, and that a pucca well in village Keshabpore had been repaired. (3) The practice of using street-sweepings and rubbish for filling up excavations had been discontinued in the case of the pits situated close to the houses. (4) That a public graveyard for the Mahomedans had been provided, and the private ones closed. (5) Steps were being taken to keep the cooly depôt in good condition. (6) That

the suggestions relating to birth and death registration had been adopted.

Patna Town.—Inspected in January 1886.—I went round with the Vice-Chairman and found that the sanitary arrangements of this important and densely-populated place were deplorably bad. In fact, many grave insanitary conditions, which were noticed during my former visit about two years ago, were still observable. The drainage was exceedingly defective: wherever I went I found drains blocked—not one was in action but was choked here and there with rubbish and dried up sludge, impounding house sewage which could only disappear partly by evaporation and partly by infiltration. Indeed, the drainage of the town was most sadly neglected. The arrangements under the head of conservancy were as bad as possible, and those regarding the disposal of the dead very unsatisfactory and objectionable. The water-supply of the place, as far as it was derived from wells, could not be considered pure owing to the general defilement of the surface. Off-sisive and dangerous trades were being carried on with impunity within municipal limits, and the Commissioners seemed almost powerless to check the evils arising therefrom in consequence of the action of the Honorary Magistrates, who often rejected prosecutions or inflicted only nominal fines on the offenders, and whose opinion with regard to sanitary rulings, in a legal point of view, was often in direct conflict with that of the municipal executive. The executive administration of the Municipality was also unsatisfactory. A grave mistake has been made by removing all executive authority from the hands of the Chairman and Vice-Chairman and vesting it in the hands of Chairmen of the Ward Committees—an unfortunate step, giving rise to a great division of authority which can only result in failure to promote the sanitary welfare of the town. All these things bore evidence of a state of affairs which reflected great discredit on municipal self-government.

legitimate extent; of adopting at particle system of valuation of holdings in place of the haphazard system now in force; of having the sections of the Municipal Act under which fees can be levied worked with profit on a graduated instead of the present uniform scale, which presses heavily on the poor license-holders, while the wealthy do not feel the impost; of requiring the owners of hackney carriages to pay higher taxes than the present rates which were fixed a long time ago; and of introducing the old system of voluntary payment under which the taxes were more readily realised, in place of the present plan of realising the taxes which does not allow of sufficient time for the tax-collectors to readily reach the rate-payers, and which permits of distress warrants being issued when they cannot pay. (2) To have the bye-laws at present in operation remodelled, revised, and added to so as to be in agreement with the present Municipal Act. (3) To consider the expediency of metalling the roads with Burrakur hill stone instead of Luckeeserai kunker, of considerably curtailing the expenditure on widening lanes, and of providing side-drains to the streets where there are none, as well as more culverts and bridges across the roads. (4) To strictly enforce the sections of the law relating to excavations. (5) In the construction of future dwellings, and when fires necessitate reconstruction, to enforce the provisions of the law of the subject. (6) For the protection of the town from the floods of the Ganges and the Poonpoon, to construct sluices at the upper entrances of the Ganges water and a protective embankment all round, utilising for this purpose the roads to the north and along a part of the southern edge of the town; but before giving effect to the above, to secure the advice of a skilled engineer of the Public Works Department. (7) To improve the condition of the defective culvert in the Chowk, the floor of which is very high. (8) To have the main outfall drain passing Chokshikarpore police-station at once made

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them in the wet season. (11) Wherever pucca drains are constructed to compel house-holders to connect their house drains with the public drains. (12) To have the conservancy estabto connect their house drains with the public drains. (12) To have the conservancy establishment efficiently supervised, and to adopt some method and system in obtaining work from the men. Also to introduce the energetic European element into the establishment in the shape of at least two inspectors. (13) To consider the advisability of purchasing more bullocks instead of hiring them. (14) To try to reduce the number of carts and bullocks by properly apportioning them to specified parts of the town. (15) To have the streets swept daily, and the by-streets and lanes every alternate day, but to have the solid house refuse from the latter removed daily, hand or wheel-barrows being employed for the purpose. (16) In dealing with hollows to take care to fill up only a certain number of them at a time, and when the process has been completed with regard to them, to take up others. (17) To and when the process has been completed with regard to them, to take up others. (17) To require the police to check the commission of nuisances as far as practicable (18) Pending the provision of good drains, to have the cess-pools in which fluid house refuse is collected emptied oftener than at present. (19. To provide more public latrines at convenient places, particularly near the police-lines, markets, and the serais, and in doing this to adopt Hornbury's patent iron latrines sold by Messrs. Burn and Company of Calcutta. (20) To take steps, after an adequate number of public latrines has been provided, for entirely suppressing promiscuous defectation (21) To enquire whether Ramsay's portable latrines are objected to by the people owing to their dirtiness, if at all. (22) To move the police authorities to provide all the police-stations throughout the town with properly-constructed latrines. Also to request the Magistrate to provide one for his kutcherry in place of the present improperly-kept miserable structure. (23) To take immediate steps to suppress the sundasses or well privies. (24) To induce the people to provide their privies with two gumlahs, one for feeces and the other for urine and washings. Also to stop the use of bits of gumlahs and tiles and other disgusting substitutes for the purpose. (25) To try to the utmost, either personally or through a strong executive, to carry out the provisions of the the utmost, either personally or through a strong executive, to carry out the provisions of the house-scavenging scheme, and to consult some of the municipalities, particularly Howrah and Burdwan, as to the *modus operandi* observed by them. (26) To at once stop the pitching of night-soil into holes in different parts of the town or pitting it near latrines; and if it is necessary to dispose of it within the town, to have it surface trenched only in fields frequently cultivated. Also to induce the cultivators to make over their lands for shallow trenching; and in connection with the above suggestions, which bear on agriculture, to take action so that Government might appoint Mr. Allen, the officer in charge of the Agricultural Department, to be a member of the municipality. (27) Never to pit night-soil within the limits of the Municipality. (28) To consider the desirableness of utilising the deara of the Ganges for the burial of night-soil during the cold and dry season in the manner explained by me. (29) To at once stop the improper disposal of the night-soil from the mobullahs near the asylum, and to acquire land for the purpose of trenching the night-soil. (30) To take steps to answer the complete removed and proper disposal of from the mohullahs near the asylum, and to acquire land for the purpose of trenching the night-soil. (30) To take steps to ensure the complete removal and proper disposal of all night-soil from the private privies. (31) To have the cattle-sheds drained and paved with stone or brick cemented, and kept in a clean condition, the ordere and urine being removed out of town. (32) To do the best to provide a properly-constructed municipal market as well as a slaughter-house. (33) To see that the compounders or dispensors in the European medicine shops are certificated, and that the drugs in the shops are not worthless and highly adulterated. (34) To enforce the provisions of the law and check the carrying out of objectionable trades within municipal limits, particularly the manufacture of bricks and pottery. (35) Not to allow milkmen and private owners of cattle to keep within municipal limits a much larger number of them than is authorised by law. (36) To request the Magistrate to prohibit the practice of throwing corpses into the river beyond the limits of the Municipality. (37) To have the tank near the Bankipore thannah properly protected from pollution from a foul ditch near it, and to see that the flood water of the Ganges or Poonpoon is not introduced into the tank called Mangles' talao through the main sewers of the city, the sewage of which enters into called Mangles' talao through the main sewers of the city, the sewage of which enters into the tank along with the river water. (38) To take up seriously and urgently the question of providing proper burial-grounds for the Mahomedans, and establish one or two general graveyards sufficiently large for the requirements of the town and situated in convenient localities. (39) To close the existing burial-grounds, and point out to the Mahomedan community the evils of promiscuous, careless and uncared-for interments within house precincts. (40) To call upon such of the Mahomedan community who can afford the expense to subscribe towards the establishment of the cemeteries. (41) To stop the pernicious and barbarous practice of throwing the Hindu and Mahomedan pauper dead, as well as uncremated and partially cremated bodies, into the river. (42) To curtail the staff of vaccinators, which appears to be unnecessarily large, and to retain four vaccinators throughout the year, one for each vaccine station. (43) To no longer allow the Compulsory Vaccination Act to remain a dead letter at Patna, but to fully utilise its provisions. (44) To strictly enforce the provisions of the Compulsory. Registration Act, particularly its penal clauses, and to make sustained efforts to place registration on a satisfactory footing.

Action taken on the suggestions—(1) Steps are being taken to increase the municipal revenue by adopting an equitable system of valuation of holdings in place of the hap-hazard system now in force. (2) A scheme is being prepared for levying license fees on a graduated scale instead of the fixed rate of one rupee. (3) A sub-committee has been appointed to revise the bye-laws with a view to make them agree with the present Municipal Act. (4) Burrakur hill stone is being used in metalling the main roads, and either Harawli

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kunkar or Lakbiserai stone in the case of the by-streets. (5) Steps have been taken to enforce the building regulations and to prevent the drains being built over. (6) The Executive and the District Engineers have been asked to give their opinion on the question of providing an embankment all round the tewn to protect it from the floods of the Ganges and the Poonpoon. (7) The drain alongside the new Chowk road has been cleaned, and endeavours will be made to make the outfall pucca throughout up to the railway. (8) The block in the drainage at Pirlahore has been removed, and also all the drains in the town have been cleaned and are still being cleaned, and the Conservancy Jemadars have been made responsible for their future cleanliness. (9) The main streets are being swept daily and the lanes every alternate day, and the sweepings are being used in filling up pits and hollows. Also the making of new excavations have been prohibited, and a list of the existing ones is being prepared. (10) Provisions have been made in the next year's budget for increasing the number of public latrines, and steps have been taken for introducing the iron structures of Hornbury's pattern. (11) The latrines attached to the Magistrate's court, the College and the police-station are being kept clean. (12) The construction of new sundasses has been prohibited, and steps are being taken to suppress the existing ones. (13) With reference to the suggestion regarding the house-scavenging scheme, the Chairmen of the Howrah and Burdwan Municipalities have been written to as regards the modus operandi observed by them. (14) The suggestions regarding the cattle-sheds are being carried out. (15) Provision has been made in the next year's budget for the erection of six slaughter-houses, one in each ward. (16) Enquiries are being made whether the compounders in all the European medicine shops are certificate fielders or not (17) The Ward Committees have been asked to prepare lists of burial-grounds in the several wards, and to report on their condi

Gya Town.—Inspected in January 1886.—Since last visit there had been some improvement in conservancy arrangements under the present supervisor, but nothing adequate had been done to place this important town on a proper sanitary footing. The drainage was extremely defective. I observed that the drains had been extensively built over, and that new structures were being put up with great rapidity, and that there was universal blocking of drains. The drinking water supply was of the worst description, and the arrangements under the heads of conservancy and disposal of the dead were still far from being satisfactory. Upon the whole, Gya was in a very bad sanitary state, and it is not surprising that cholera is never absent from it. In fact it is a common belief, not without many facts in its favor, that the town is a great distributing centre of cholera, and that many pilgrims fall victims to the disease when resident in it.

that the town is a great distributing centre of cholera, and that many pilgrims fall victims to the disease when resident in it.

The suggestions vere—(1) To make more than ordinary efforts to improve the sanitary condition of this great centre of pilgrimage. (2) To consider the advisability, or rather the necessity, of slightly raising the taxes, and devising other means for increasing the municipal revenue. (3) To fully utilise the sections of Part VI of the Municipal Act which refers to building regulations, and have the crowding together of huts without proper drainage or facilities for seavengering prevented. (4) To have the sanitary clauses of the above-named Act administered with the desired activity and closeness. (5) To promptly attend to such defects in the drains as blocking with rubbish, accumulation of foul stinking slush, &c. (6) To allow all house drains to discharge into the public drains. (7) To gradually convert the existing kutche deep side-drains in a new proper shallow succr-shaped ones. (8) To strictly enforce soction 232 of the Municipa. Ac. and put a stop to the making of further excavations. (9) To set apart every year a small portion of the municipal revenue for filling up some of the hollows with mud and sand from the river bed. (10) To make the Khawa ditch a permanent central channel and maintain it in proper order. (11) To have the main outlet to the Phalgu at Nadraguage, which I examined, made pucca for the greater part of its tewer length. (12) To fully exercise the powers conferred on the Commissioners by law, and prevent the drains being further built over. (13) To keep all the drains clean at all seasons of the year, and to strictly prohibit the taking of earth from the drains, and thereby destroying their levels. (14) To look after the proper working of the establishment detailed for cleaning the drains, and insist on getting full value for the money laid out on it. (15) To have a complete scheme of drainage gradually carried out under professional supervision, some progress b

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(28) To have some than three days. (27) To remove the pig-stys beyond municipal limits. of the existing latrines and a few of those which are proposed to be constructed, exclusively reserved for the accommodation of females. (29) To consider the advisability of introducing Hornbury's patcht iron latrines sold by Messrs. Burn & Company of Calcutta. (30) To tar the gumlahs, as well as the drains and the walls of the public latrines, more frequently than heretofore. (31) To properly carry out the dry-earth system in the public latrines. (32) To tar the public urinals regularly. (33) With the increase in the public latrine accommodation, to make persevering endeavours to put down promiscuous defectation. (34) To take early steps to introduce Part IX of the Municipal Act. (35) To at once close the trenching ground which is in the very heart of the town, and to see that the trenching grounds are situated at the outskirt of the town far away from the inhabited quarter, but within easy reach of the groups of privies from which the soil is removed to them. (36) To acquire as soon as possible land for establishing Mahomedan graveyards. (37) To provide a special enclosure for carrying on cremation within it instead of on the dry bed of Phalgu. (38) Not to allow the domes to appropriate the clothes, pillows, &c., of the deceased, but to have these dangerous relics always burned along with the body. (39) To at once discontinue the practice of burying the Hindu and Mahomedan pauper dead on the bed of the river, and to cause the bodies to be either burned in the public cemeteries to be shortly provided, or cremated the provided of the Municipality. (40) To see that the privies of the lodging boyses are best cause the bodies to be either buried in the public cemeteries to be shortly provided, or cremated at the cost of the Municipality. (40) To see that the privies of the lodging-houses are kept scrupulously clean. (41) To do everything to improve the sanitary condition of the lodging-houses, giving particular attention to drainage and conservancy. (42) To strictly work the Poori Lodging-house Act which is in force here. (43) To fully utilise the Compulsory Vaccination Act, particularly its penal provisions, and to employ, if necessary, extra vaccinators during the vaccination season to push on the work more vigorously. (44) To specially appoint a man to go round the various wards and detect all evasions of the requirements of the Compulsory Registration Act, and to systematically prosecute all offenders. Also to adopt the Compulsory Registration Act, and to systomatically prosecute all offenders. Also to adopt measures generally to place registration on a satisfactory footing.

Action taken on the suggestions.—The suggestions are still under consideration, and a

full report of the action taken will be submitted hereafter.

Arrah Town.—Inspected in Junuary 1886.—I began the inspection on the evening of the 26th, and saw the civil station, the police lines, the mode in which the tank near the kutcherry and one in the town were filled with canal water, and the opium godowns and places of weighment, and the residence of the ryots while giving in their opium crop. morning I went round the town with the Vice-Chairman and observed that although many improvements had been effected since last visit, the sanitary condition of Arrah was still, upon the whole, very defective. I was, however, glad to find that its drainage and latrine accommodation had been considered by the Commissioners, and both the Chairman and Vice-Chairman seemed alive to the necessities of the town, and were manifesting great interest in

its sanitary welfare.

The suggestions were—(1) To devote annually a fair and equitable share of the income for placing the town on a thoroughly sound sanitary footing. (2) To bring into operation a code of bye-laws framed under the Bengal Municipal Act of 1884. (3) To communicate a code of bye-laws framed under the Dengal Municipal Act of 1884. (3) 10 communicate directly with Mr. Allen, the officer of the Agricultural Department, concerning the acquirement of certain filthy water-holes situated in a khas mehal under that Department. (4) To provide as soon as possible pueca drains for the conveyance away of surface water. (5) Not to permit the drains to be blocked and full of foul water. (6) To allow all bath-room water and spill water from wells, &c., to pass into the drains in their present condition, where there are no pueca cess-pools, instead of impounding it in or near houses or in house quadrangles. (7) To have the proposed scheme of providing an efficient system of pucca drainage carried out gradually, some progress being made every year (8) To consider the expediency of selecting a safer and more direct channel for the water from the Judge's compound to the selecting a safer and more direct channel for the water from the Judge's compound to the canal. (9) To have the wells used for drinking properly surrounded by pucca platforms to prevent re-entry of spill water. (10) To provide all the wells with a drain to carry off spill water some distance. (11) To construct, as proposed, the additional public latrines without further delay. (12) To move the Magistrate to provide proper latrine accommodation for the police-lines and the public hospital. (13) To make persevering endeavours to suppress the abominable well-privies. (14) With the gradual increase in public latrine accommodation, to adopt measures to put down promiscuous defectation. (15) To take early steps for bringing Part IX of the Municipal Act into operation. (16) To establish at the outskirt of the town, well away from the inhabited quarter, two or three trenching grounds conveniently situated with reference to the privies from which night-soil is to be conveyed to them, and to have these regularly cultivated after they are manured. (17) To have the and to have these regularly cultivated after they are manured. (17) To have the drainage of the municipal market attended to, and the exit drain kept open at all seasons and not bunded up. (18) To have the floors of the market gradually made pucca. (19) To build, when funds permit, a commodious meat market. (20) Not to allow the trade in bones at Aboor-pool to be carried on among closely inhabited houses, but to have it removed outside Aboor-pool to be carried on among closely annabled houses, but to have it removed outside municipal limits. (21) To prohibit burials in shallow graves, and see that in the case of the Mahomedans the graves are dug deep enough to allow of the chupper being placed at last four feet under the ground. (22) To try to put a stop to the use of the Mahomedan burial-grounds inside the town. (23) Not to allow the clothes, pillows, &c., of the deceased to be taken away by the domes and fakirs, but to have these always burned along with the body. (24) To fully utilise the Compulsory Registration Act, particularly its penal clauses, specially appoint a person to detect and report for punishment all omissions of the provisions of the

law, and require the tax-collectors to report all births and deaths as a check on voluntary registration. (25) To induce the midwives to give information of all births which they attend.

Action taken on the suggestions.—A sub-committee was formed to consider the suggestions made, and they have submitted a report in which they express a general concurrence with the suggestions, and recommend the construction of additional latrines, &c. The whole subject is still under the consideration of the Municipal Committee.

Chupra Town.—Inspected in January 1886.—I inspected the town in company with the Vice-Chairman, Baboo Rajendra Nath Roy, who had lately assumed the office. Upon the whole, the sanitary state of the town was seen to have somewhat advanced since my last visit: some of the pucca drains in the more crowded parts of the town were free from rubbish, and the streets were generally clean, but there were still many defects to be reformed before Chapra could be looked upon as a well-cared for town. The drainage was extremely defective, and the arrangements under the heads of water-supply and disposal of the dead were far from being satisfactory, and parts of the town, such as mobullah Ratanpore, &c.,

were in a very insanitary condition:

The suggestions were—(1) To devote annually a fair and equitable share of the income for rectifying the existing sanitary defects and placing every part of the town on a thoroughly sound sanitary footing. (2) To consider the expediency of slightly raising the taxes, so that more funds might be available for improving the sanitary status of the town. (3) To fully utilise the sections of Part VI of the Municipal Act. which relate to building regulations, and prevent the crowding together of houses without proper provision for ventilation or facilities for scavengering. (4) To administer the sanitary clauses of the Municipal Act with greater activity than at present. (5) To have the kutcha roads gradually metalled, a certain length of them being taken up every year. (6) To construct a good pucca road through mobullah Ratanpore, care being taken to open out the crowded portions of the (7) To entertain a permanent o tablishment of drain-coolies throughout the year, and hold them responsible that the drains are always in good order. (8) To gradually provide pucca drains of a saucer not square shape throughout the town, and to seek the assistance of wealthy residents to lay them down in front of their house premises. (9) To have the town properly surveyed and levels ascertained according to which drains can be made, and to gradually carry out a proper scheme of drainage, parts being done every year. (10) To adopt measures to improve the condition of the house drains, and to have them connected with the public drains wherever the latter are pucca. (11) To carry out as early as possible the proposal to take possession of the spoil bank of the Salempore tank, and keep the site scrupulously clean. (12) To encourage the proprietor of Ghose's tank to fill it up. (13) To ask the owners of the private wells which are used for drinking to erect round them good protective masonry parapets and platforms, and to drain the area all round the platform. (11) To exclusively set apart for drinking and other domestic purposes a sufficient number of wells, thoroughly protect them from pollution, supply them with buckets and chains with pulleys for drawing water, and strictly prohibit the dipping of private vessels into them (15) 10 have the conservancy establishment strictly supervised and the work of each man detailed, and that work taken from him in full. (16) To have and the work of each man detailed, and that work taken from him in full. (16) To have the drains included in surface cleansing and thereby kept permanently clean. (17) To provide barrel-carts for the removal of fluid house refuse to the trenching grounds for disposal, until such time as the refuse can be incharged into pueca drains. (18) To employ a portion of the money realised by the said of street-sweepings and the refuse in filling up foul pits and holes with earth and sand from the churs. (19) To require the owners of cow and cattle-sheds to maintain them in proper order, quite free from all offensive smells. (20) To at once put a stop to the burning of the bones of the slaughter-houses at Karimchuck, and never to permit the storage of raw bones amongst and adjacent to dwellings. (21) To construct, as proposed, some more public latrines at convenient places, and to exclusively reserve a few of them for the accommodation of females. (22) To tar the gumlahs, the drains, and the walls of the public latrines up to three feet from the floor, twice a month, and not twice a year as proposed. (23) To ask the overseers to see that the public latrines are kept scrupulously clean and sweet. (24) With the gradual increase in public latrine accommodation, to make persevering endeavours to prevent promiscuous defeccation. (25) To induce those of the people who can afford the cost of construction to provide for themselves surface privies which could be cleaned easily. (26) To have Part IX of the Municipal Act, after it is brought into operation, very carefully and stringently worked. (27) To carry out the trenching system properly, the trenches being dug in lines one foot deep and one foot wide, and only six inches of night-soil put into them and the remainder covered with earth; also to do all in their power to get the use of land for shallow trenchin gnear the public latrines. (28) To require the owners of the private markets to provide a latrine near each of them for the use of the market people. (29) As soon as the slaughter-house are built, to prohibit the killing of cattle at any other place. (30) To establish the proposesd public burial grounds as soon as possible, and after they are provided, to require the owners of the old grounds to plant them with trees. (81) To conduct burials in the new graveyards to be provided, methodically so as to economise space, and to have the graves dug sufficiently deep, so that the *chupper* may be at least four feet under the ground. (32) To have the clothes, pillows, &c., of the deceased always burnt along with the body. (33) To at once stop the hurtful practices of throwing the Hindu pauper dead, as well as uncremated or partially cremated bodies, into the river, and to have the pauper dead either burned or buried at

municipal cost. and insist upon complete cremation in all other cases. (34) To take early steps to introduce the Compulsory Vaccination Act. (35) To fully utilise the provisions of the Compulsory Registration Act, particularly its penal clauses. (36) To specially appoint a man to detect and report for punishment all omissions of the requirements of the abovenamed law. (37) To require the municipal servants, such as tax-collectors, overseers, &c., to report births and deaths as a check on the police reports and voluntary registration. (38) To induce the midwives to give information of all births which they attend.

Mozufferpore Town.—Inspected in January 1886.—The sanitary condition of this town was very unsatisfactory. I failed to find any improvement since last visit. There was evidence of neglect on every side, and I was obliged to record an unfavourable opinion of the administration of municipal affairs here. The Commissioners appeared indifferent to the sanitary welfare of the place, and many grave defects were seen which required urgent rectification. The drainage arrangements were as bad as could be, and certainly very discreditable to the Commissioners. The drains were universally obstructed, and in no instance answered the purposes for which they are intended. The arrangements under the heads of water-supply and conservancy were very defective, and in some cases objectionable. There were, moreover, numberless foul pits and excavations, and it, was strange that no step had been taken to deal with these nuisances.

The suggestions were—(1) To devote year after year the greater portion of the amount over Rs. 6,900 set free by the Municipality having been relieved of police charges, as well as a fair share of the remaining income, to place the town on a sound sanitary footing. (2) To try to curtail as much as possible the expenditure incurred for maintaining the municipal establishment shown under head G, page 4, of the Municipal Memorandum Book. (3) To consider the desirability of raising the taxes a little. (4) To fully utilise the sections of Part VI of the Municipal Act, which relate to building regulations, and prevent the crowding together of huts without suitable provision for ventilation or drainage. (5) To have the sanitary clauses of the Municipal Act administered with the desired activity and closeness. (6) To strictly enforce section 232 of the above Act, and prevent the formation of hollows, &c. (7) To make persevering endeavours to gradually obliterate all the pits and holes, street-sweepings, and the solid refuse from houses being fully utilised for the purpose when the pits are at a distance from the dwellings, and care being taken to limit the operation to only so many of them at a time as could be filled up within a short period. (8) To cononly so many of them at a time as could be filled up within a short period. (8) 10 consider the advisability of acquiring some of the larger hollows and converting them into tanks for drinking purposes, and employing the earth which would then become available, in filling in smaller holes around. (9) To have the drains properly attended to, their levels gradually improved, and an outfall to the south opened out. (10) To fully utilise sections 202 and 204 of the Municipal Act, prevent all future encroachments over drains, take steps to deal with the existing ones, and permit no new erections except what are sufficient for entrance to and exit from houses and shops. (11) To begin work as early as possible in connection with the provision of an improved system of drainage which is being considered by the Commissioners, and to either carry out the project gradually, some progress being made by the Commissioners, and to either carry out the project gradually, some progress being made every year, or raise a loan for bringing it into speedy completion. (12) To have all sidedrains to the chief streets pucca, shallow, and saucer-shaped. (13) To have all house drains connected with the road side drains wherever the latter are pucca. (14) To induce the owners of such of the foul tanks as cannot be maintained in a wholesome condition to have them filled up. (15) To connect as many of the tanks as possible with one another, and with the river Gundak. (16) To take immediate action to prevent soakage in the vicinity of the wells used for drinking. (17) To reserve exclusively for drinking a sufficient number of the public wells, properly protect them from pollution, supply them with buckets and chains with pulleys for raising water, and prohibit the promiseuous dipping of vessels into them. (18) To favourably reconsider the scheme for supplying the town with filtered water from the river Gundak, raise a loan for carrying out the work, and put an end to the present deplorable state of things as soon as possible. (19) To sufficiently strengthen the conservancy establishment and have it strictly supervised. (20) To provide more hand-barrows for the proper conservancy of the lanes and by-paths. (21) To supply barrel-carts for the removal of fluid house-refuse to the trenching grounds for disposal, and to properly supervise the cleaning of the vats into which the refuse is collected. (22) To have the drains included in surface cleansing and kept permanently clean. (23) To require the owners of the cow and other cattlesheds to keep them in a clean and inoffensive state. (24) Not to permit cow-dung to be accumulated within house premises, but to have it either converted into cakes for fuel or, deposited in the fields for use as manure. (25) To construct an adequate number of public latrines at convenient places, and reserve some of them and two or three of the existing ones for the exclusive use of females. Also in place of the ordinary structures, to adopt Hornbury's patent iron latrines sold by Messrs. Burn and Company of Calcutta. (26) To provide all the public latrines with pucca floors at least, as well as with pucca shallow drains. (27) To have the gumlahs, the drains, and the walls of the public latrines up to three feet high properly tarred twice a month. (28) To cause the dry-earth system to be properly carried out in all the latrines, and to require the methers to sprinkle a sufficient quantity of dry earth over the gumlah each time it is used. (29) To keep the public latrines in good repair and scrupulously clean and sweet, and to hold the conservancy overseers responsible for the cleanliness of the latrines. (30) To have the latrines intended for females attended to by methranis only. (31) To provide sheds for methers near the latrines, so that they may reside there and clean them as often as necessary. (32) With

the increase in public latrine accommodation, to make persevering endeavours to put down promiscuous defecation. (33) To put up public urinals in crowded localities and at places most frequented by the people. (34) To at once take steps for bringing Part IX of the Municipal Act into operation. (35) To properly carry out the trenching system, the trenches being dug in lines one foot wide and one foot deep, and only half filled with night-soil, the remainder being covered with earth. (36) To induce the cultivators to make over their lands for shallow trenching. Also to establish one or two trenching grounds at places well removed from the inhabited quarters, but within easy reach of the night-soil depôts from which the filth is to be conveyed to them. (37) To gradually provide the municipal markets with pucca floors, and to keep their drains quite free to act. (38) To prohibit further interments in the municipal graveyard which is overcrowded, and have the ground planted with rapidly-growing trees and shrubs. Also to establish another cemetery in its stead. (39) To require the chowkidar in charge of the burial-ground to see that the chapper over the with rapidly-growing trees and shrubs. Also to establish another cemetery in its stead. (39) To require the chowkidar in charge of the burial-ground to see that the chapper over the grave is placed at least four feet below the surface of the ground. (40) To stop, if it should turn out to be true, the practice of throwing partially cremated bodies in the river. (41) To prevent the appropriation of the clothes, pillows, &c., of the deceased by the domes, and to have these completely destroyed by fire. (42) To appoint extra vaccinators during the vaccination season, so that all the children born during the year and a certain number of the people who are still unprotected may be vaccinated. (43) To discourage the practice of inequalities, and to present a say person who returns to the town with the vesciles on his of inoculation, and to prosecute any person who returns to the town with the vescicles on his arm or in a state to afford contagion. (44) To make proper arrangements for the efficient administration of the Compulsory Registration Act, particular attention being paid to fully utilising its penal provisions. (45) To specially appoint a man to detect and report for punishment all evasions by the people of the requirements of the above-named law. (46) To require the overseers and the tax-collectors to report births and deaths as a check on voluntary registration. (47) To introduce the hath-chitti system, the receipts granted for deaths reported being required to be made over to the constables or other persons who are in charge of the burial and burning-grounds. (48) To induce the midwives to give

information of the births at which they attend.

Action taken on the suggestions.—Steps are being taken to carry out the suggestions regarding the improvement of the town drainage. The other suggestions are under the

consideration of the Commissioners.

Motihari Town.—Inspected in February 1886.—Commendable sanitary improvements were seen to have been effected since the town was last visited. Steps had been taken for increasing the municipal income by raising the house-tax; several pucca roads and drains had been constructed at a cost of over Rs. 3,500; street-sweepings were being carefully utilised in filling up holes; two new latrines—one for males and the other for females—had been added to the serai; sufficient land had been provided for trenching purposes; a large municipal market had been established; land was being acquired for erecting a slaughter-house; arrangements had been made for the proper supervision of the burial and the burninggrounds; steps had been taken for introducing the Compulsory Vaccination Act; and a separate registrar of births and deaths had been appointed. The Commissioners were exhibiting great interest in the sanitary welfare of the town, and no doubt much had been done in this direction, but there were still many grave defects which required early rectification.

The suggestions were—(1) To try to seed as much saving as possible in the expenditure The suggestions were—(1) To fig to the enter as much saving as possible in the expenditure under the head "Maintenance of hospital," &c. (2) To continue to devote annually an equitable share of the income to rectify the sanitary defects which still exist and to place every part of the town on a satisfactory sanitary footing. (3) To have the pits that are in a very bad state filled entirely and covered with earth as soon as possible. (4) To utilise the earth to be taken from the excavation of Baboo Gopal Sahu's tank in filling up hollows and excavations. Also to make persevering endeavours to gradually obliterate these nuisances (5) To provide pucca side-drains to most of the streets of the town, and to have them constructed of a saucer shape and as shallow as compatible with the amount of rain-water to be carried off. (6) Not to permit the pucca drains to be obstructed with accumulations of earth and rubbish.
(7) To require the road sweepers to look after the drains daily, and to remove all rubbish, &c., from them. (8) To prevent the drains being built over in future, and to oblige the owners of such structures to provide man-holes to enable the coolies to clean the drains. (9) To allow the house drains to discharge into the public drains wherever possible. (10) To have the town properly surveyed and levels ascertained according to which drains can be made; to undertake an efficient system of drainage. and have the project carried out gradually, some progress being made every year. (11) To require householders to keep their house drains clean. (12) To see that the wells used for drinking are sunk deep in order that a perennial supply may be secured. (13) To provide all the wells with puece parapets and platforms. surrounded by shallow saucer drains having connection with another drain to carry off spill water to a good distance from the wells, or, where possible, to the nearest public drain.

(14) To prohibit the dipping of private vessels into the municipal wells if not into others, and supply them with buckets and chains with pulleys for raising water. (15) To adequately strengthen the conservancy establishment and to increase the number of carts. (16) To provide wheel-barrows for the conservancy of the lanes and by-paths. (17) Either to strengthen the present establishment detailed for cleaning the drains, or to require the road coolies to attend to them in addition to sweeping the roads. (18) To provide some public lutrines at convenient places, and set apart a few of them for the exclusive use of famales.

Also to introduce Hornbury's pattern corrugated iron latrines in place of building the ordinary structures. (19) To keep all the latrines scrupulously clean and inoffensive, and have those reserved for females attended to by methranis only. (20) To use dry earth in all the public latrines. (21) To induce those who can afford the cost of construction to provide themselves with surface privies, with receptacles which could be easily cleaned. (22) To require the owners of such of the private privies as are dirty to keep them in proper order. (23) With the gradual provision of public latrine accommodation, to take steps to prevent promiscuous deficeation as much as possible. (24) To carry out the trenching system in the manner in use in the jail garden. (25) To require the owner of the market in the town proper to maintain it in proper order, and if he fails to do so, to cancel the license for the market. (26) After the construction of the proposed slaughter-house to prohibit the killing of cattle at other places. (27) To allow none but healthy cattle to be killed for food consumption. (28) To see that the graves are dug sufficiently deep, so that the chapper, which is usually placed over the Mahomedan dead, may be at least four feet below the ground surface. (29) To prevent by every possible means the practice of throwing partially cremated bodies into the rivers Shikarana and Dhanowti. (30) To make suitable arrangements for satisfactorily carrying on vaccination and putting the town in a state of perfect protection. (31) To fully utilise the provisions of the Compulsory Registration Act, particularly its penal clauses, and to require the registrar specially appointed for the law and bring the offenders for punishment. (32) To see that the overseers and the tax-collectors regularly report the events as a check on voluntary registration.

Action taken on the suggestions:—(1) Two large pits in the heart of the town have been nearly filled up. (2) Provision has been made in the ensuing year's budget for keeping the wells in good order and providing the municipal ones with buckets and chains with pulleys. (3) It has been resolved to acquire two bighas of land for trenching night-soil, and pending its provision, night-soil is being trenched in the jail gardens. (4) A proper slaughter-house has been constructed, and is under the supervision of the Mahomedan Commissioners. (5) Two

public latrines—one for males and the other for females—have been constructed.

Bettiah Town.—Inspected in February 1886.—I visited Bettiah in company with Dr. Bovill, the Civil Surgeon of Chumparun, and found it in much the same condition as when seen on the last occasion. Serious defects were observed under almost every branch of sanitation. The drainage and the conservancy arrangements were very defective, and the quality of the water used for drinking and other domestic purposes was far from being satisfactory. Pits and hollows were also very numerous. To add to the unhealthiness of the place, the houses of the people are mostly kutcha and damp, ill-ventilated, badly drained, and overcrowded. What little the Commissioners had done since last inspection to improve the

sanitation of the town was quite inadequate to local wants.

The suggestions were:—(1) To allow year after year the greater portion of the amount set free by the Municipality having been relieved of police charges, in addition to a fair and equitable proportion of the remaining income, for remedying the existing defects and materially improving the sanitary condition of the town. (2) To seriously consider the desirability of slightly raising the taxes. (3) To fully utilise the sections of Part VI of the Municipal Act which relate to building regulations. (4) To bring into operation a code of bye-laws framed under the above-named enactment. (5) In filling in pits and hollows to take up only so many of them at a time as can be dealt with expeditiously, and as they are filled up, to spread a layer of earth over the surface and encourage the growth of grass and rapidly-growing herbage upon it. (6) To strictly enforce section 232 of the Municipal Act and put a stop to the making of further excavations for the purpose of taking earth, &2, therefrom. (7) To fully explain to the people the evils arising from living in houses that are damp, ill-ventilated, overcrowded, &2, and to insist on the construction of houses on a better and approved plan in future. Also to introduce Dr. Cunningham's Sanitary Primer into all schools maintained or aided by the Municipality. (8) In providing puces drains in future to construct none but those of saucer shape, and to keep the existing puces ones scrupulously clean at all seasons. (9) To make the cleaning of the drains a part of the duty of the street-cleansing establishment. (10) To take up the question of drainage, and gradually carry out a proper scheme of drainage, some progress being made every year. (11) To have more wells surrounded with masonry parapets as well as with proper drains to carry off spill water. Also to cause wells to be sunk deep in order that a permanent and a comparatively pure water-supply may be obtained. (12) Not to lose sight of the scheme for connecting the Gundak with the Chundrawati, but to cause an estimate of th

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inhabitants who can afford the cost of construction to provide for themselves properly constructed surface privies with receptacles which could be easily cleaned. (22) To make persevering endeavours to put down promiscuous defectation, and to require the police, under section 365 of the Municipal Act, to perform this part of their duty more actively than heretofore. (23) To properly carry out the trenching system, and to have the grounds regularly cultivated. (24) To request the Maharaja to gradually improve the condition of the markets belonging to him, and to attend to their conservancy. (25) To construct a slaughter-house on a small scale with proper drainage and water supply, and after it is established, to prohibit the killing of cattle at any other place. (26) To see that in the public graveyards for the Mahamedans bodies are buried in lines with fixed distances between each grave and each row of graves. (27) If the Maharaja wishes to keep the serai under his own management, to request him to complete the building as well as to keep it in good order, carefully look after its conservancy, and provide it with a latrine and a good puces well. (28) To strictly enforce the provisions of the Compulsory Vaccination Act. (29) To require both the mohurrir and the chaprassi specially appointed for registration purposes to go round the town for a few hours daily to detect and report for punishment all evasions by the people of the requirements of the Compulsory Registration Act. (30) To require the tax-collector, &c, to report all births and deaths as a check on voluntary registration.

Action taken on the suggestions:—(1) A code of bye-laws under the present Municipal Act has been framed and submitted to Government for sanction. (2) The suggestions with regard to roads and, pits will be carried out. (3) The entertainment of some more methers has been provided for in the next budget. (4) Wheel-barrows will be introduced experimentally. (5) The public latrines will be tarred. (6) Every endeavour is being made to prevent promiscuous defocation. (7) The treuching system is being properly carried out. (8) Steps have been taken to keep the serai in good order. (9) Saucer-shaped drains have been introduced in the town.

Durbhanga Town.—Inspected in Pairwary 1886—The sanitary condition of this town was very bad. There were grave defects under almost every branch of sanitation, particularly under drainage and conservancy, and little had been done since last inspection to remedy them. The Commissioners seemed more inclined to spend money on such luxuries as watering roads (Rs. 2,016), lighting (Rs. 1,750), increasing pay of establishment, already too high, and so forth, than to exert themselves to remove the extremely insanitary conditions which foster the generation and enhance the severity of epidemic diseases. The whole place was riddled with dirty holes and ditches full of the foulest water, and many reeking with decaying vegetation.

The suggestions were—(1) To gradually rectify the existing sanitary defects which are endless, and devote for the purpose, in accordance with the special wishes of Government on the subject, the greater portion of the amount set free by the Municipality having been relieved of police charges, as well as a fair and equitable share of the remaining income.

(2) To consider the expediency of raising the taxes, so that more funds might be forthcoming for improving the sanitary status of the town. (3) To fully utilise the sections of l'art VI, which relate to building regulations, and prevent in future the irregular laying out and construction of houses without proper provision for ventilation or facilities for scavengering. (4) To administer the sanitary clauses of the Municipal Act with greater activity. (5) To strictly enforce section 232 of the was remarked Act, and prevent the making of further excavations. (6) To employ street-sweepings and the solid refuse from houses in filling up all dirty pits and water-holes when they are at a distance from the habitations of the people. (7) To acquire some of the larger excavations and convert them into tanks, and to utilise the earth which would then become available in filling in smaller holes around. (8) To consider the advisability of annually setting apart a small portion of the municipal revenue for filling up some of the filthy hollows and ditches with earth and sand from the river bed during the dry season. (9) To undertake a proper survey of the town, and to carefully prepare a complete scheme of drainage, and either to raise a loan for quickly carrying out this important work, or to take it up year by year in parts, and have it executed gradually. (10) To divert, as far as practicable, all the drains from emptying into tanks and hollows. (11) To construct puccas shallow saucer-shaped side-drains in the crowded localities and along the principal thoroughfares, and to make arrangements for connecting all house drains with them. (12) Pending the provision of an improved drainage system, to maintain the existing drains in order and quite free to act, and to prevent the throwing of rubbish into, and the taking of earth from, (13) To see that the house drains are kept properly clean. (14) Either to remove the houses from the bank of the Lalpokur, or to have the bank so raised that water, &c., from the houses will run away from the tank. (15) By all means to prevent bathing in the tanks reserved for drinking. (16) To construct a pucca shallow drain around the rim of the platform round the mouths of the wells used for drinking, having connection with another pucca drain, so that the spill water may be carried to a good distance from the well. (17) To keep the pumps supplied to the municipal wells in good repair. (18) To see that the banks of the river is not fouled by squatters. (19) To have all the tanks and pools, as far as practicable, connected with one another and with the river. (20) To adequately strengthen the conservancy establishment, increase the number of carts, and have the establishment strictly supervised. (21) To require the methers to give a month's notice prior to leaving service. (22) To require the people to bring out all house-rubbish, &c., at some fixed hour and deposit them on the madside for removal by the conservancy carts; to insist on the

cleanlines of the surroundings of houses, and to take steps to remove all existing accumulations of filth and rubbish from them at the cost of the owners. 23) To have all the lanes and by-paths swept every alternate day, and to provide wheel-barrows for their proper conservancy. (24) Not to employ sewage and other offensive matters in filling up pits and holes, but to have them buried in the trenching grounds. (25) To provide a sufficient number of barrel-carts for the removal of fluid house and kitchen refuse to the trenching ground for disposal, until such time as the refuse can be discharged into pucca public drains. (26) To include drains in surface cleansing and keep them permanently (27) To provide more public latrines in the crowded parts of the town, and specially one near the large market on the river bank, and set apart a few of them and some of the existing ones for the exclusive use of females. Also to adopt the use of Hornbury's patent iron latrines. (28) To keep all the latrines in good repair and scrupulously patent iron latrines. (28) To keep all the latrines in good repair and sorupulously clean and inoffensive (29) To require the overseers to see that the dry-earth system is properly carried out in all the latrines. (30) To gradually increase the number of public urinals, and to keep the iron sheeting of these structures carefully tarred to prevent corrosion. (31) With the increase in public latrine accommodation to make persevering endeavours to put down promiscuous defectation. (32) To induce those who can afford the cost of construction to provide themselves with properly-constructed surface privies. the cost of construction to provide themselves with properly-constructed surface privies. (33) To take early steps for bringing into operation Part IX of the Municipal Act. (34) To properly carry out the trenching system, the trenches being dug in lines one foot deep and one foot wide, and so much night-soil poured into them as would admit of their being covered with a layer of earth. Also to demonstrate to the people the value of this manure, and induce the ryots to make over their lands for shallow trenching. (35) When a portion of the ground is manured as above, to have it cultivated, so that the purity of the soil may be restored. (36) To take steps to prevent the sale of unwholesome food or drink. (37) To make such additions and alterations in the new slaughter-house building as to suit the purposes for which it is intended, and after the building has been completed, to prohibit the killing of cattle at any other place, and allow none but healtny cattle to be killed for food consumption. (38) To close all private cemeteries within municipal limits, permit no further interments in them, and require their owners to plant them with trees. (39) To establish outside the town a few conveniently-situated burial-grounds in place of the private ones to be closed. (40) Not to permit apprentices to vaccinate on their own account and take fees, but to have vaccination done by the municipal servants only, who alone can be held responsible. (41) To see that the provisions of the Compulsory Vaccination Act are properly carried out, and that men of sufficient education are obtained as operators who can keep the prescribed registers. (42) To properly conduct and look after the existing arrangements for collecting the vital statistics, and adopt measures generally to secure accuracy in registration. (43) To induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—(1) Phoca platforms have been built around the mouths of eight municipal wells, and repairs done to the platforms of some of the private ones that are largely used by the people. (2) All the pucca latrines have been repaired and their drains, &c., put into order. (3) Four additional public latrines have been provided, and of the kutcha structures some have been separately assigned for the accommodation of females, and the rest for that of males. (4) The floor of the slaughter house has been properly cemented.

Regarding the other suggestions, it was reported that they were under consideration of the Commissioners, and that endeavours would be made to carry them out as far as possible during the current and the ensuing years.

Chittagong Town—Inspected in February 1886.—I inspected the town generally accompanied by the overseers, who were both ignorant and deceitful, doing their best not to supply information, and, if any, information of an incorrect character. It appeared that there had been since my last visit some improvement in roads and bridges and enclosure of springs, but the sanitary status of the town had hardly advanced at all, and all the evils before pointed out yet remained to be dealt with, and much was being done, such as the creation of more pits and hollows for the making of bricks, the digging of holes generally, the blocking of drainage channels, the non-removal of filth and jungle, and so forth, which would all tend to intensify the bad reputation of Chittagong. Paucity of funds had to some extent prevented the Commissioners from undertaking much sanitary work, but there is no doubt that with the money at their disposal far more could have been done than had been done; but this would have required active personal supervision on the part of the Chairman, Vice-Chairman, and the Commissioners, and the stringent supervision of the conservancy establishment. In fact, Chittagong had evidence of being a sadly neglected town, and the Commissioners appeared to be in a chronic state of inability to effect much good in it.

The suggestions were:—(1) To take early steps to move the Revenue and the Public Works Departments to undertake the important sanitary works the execution of which was left to them according to Government order No. 1021T—M, dated 23rd August 1883. • (2) To devote annually the greater portion of the amount set free by the Municipality having been relieved of police charges, in addition to a fair share of its remaining income to place every part of the town on a perfectly sound sanitary footing. (3) To consider the expediency of slightly raising the taxes. (4) To strictly enforce the sections of Part VI of the Municipal Act which bear on building regulations, and prevent the crowding together of huts without passages between them for admitting conservancy carts or proper provision for

ventilation. (5) To prevent the narrow lanes being used as repositories for the filth of the neighbourhood. (6) To gradually metal some of the important kutcha roads. (7) To put a stop to the making of further excavations, and to have bricks made beyond town limits. (8) To fully utilise section 232 of the Municipal Act, and make persevering endeavours to gradually fill up all pits and hollows. (9) As far as practicable, to have all the pits connected with one another and with the nearest natural drainage channel. (10) To annually set apart a small portion of the income for filling up some of the foul holes and pits with mud and sand from the river churs during the hot season. (11) To have the Chaktai nullah and the other natural drains cleared of silt and jungle and maintained in proper order. (12) To maintain a properly supervised establishment to been all the side drains cleared of the side dr and the other natural drains cleared of silt and jungle and maintained in proper order. (12) To maintain a properly supervised establishment to keep all the side-drains clean and free to act at all seasons. (13) To provide more pucca shallow saucer-shaped drains by the sides of the principal streets and in the crowded localities, and to make arrangements for connecting all house drains with them. (14) To see that the drains in the mosque enclosure at Buxihat are kept properly clean and not choked with fifthy sludge. (15) To have the town properly surveyed and levels ascertained according to which drains can be made, and to undertake a complete scheme of drainage, and carry it out gradually. (16) To substitute light wooden covers for the mat ones over the municipal wells and springs reserved for drinking. (17) To have as many of the springs as yield a good supply properly enclosed and conserved. (18) To consider the desirability of improving the water-supply by sinking wells at the foot of the various hills where springs exist, raising this water by means of pumps and discharging to hydrants throughout the town by pipes. (19) To require the owner of the filthy spring in Dewanbazar to clean it out and keep it in proper order. (20) Where it is possible, to have the surplus water of springs carried into tanks (21) To require the owners of such tanks as are quite useless to have them gradually filled up. (22) To take steps to introduce river water into as many of the tanks as possible. (23) To adequately strengthen the conservancy establishment and increase the number of carts. Also to have the establishment efficiently supervised, the present sub-overseers, who appear completely to fail in realising their duties, being changed. (24) To provide wheelbarrows for the proper conservancy of the narrow lanes and by-paths. (25) To require the people to bring out at the appointed hour all house-rubbish, &c., and deposit them on the roadside for removal by the conservancy carts. (26) To have all the principal streets swept daily, and the lanes and by-paths at least twice a week, and the sweepings removed regularly. (27) To construct more public latrines on an improved plan at convenient places, and reserve (27) To construct more public latrines on an improved plan at convenient places, and reserve some of them and three or four of the existing ones for the exclusive use of females. Also to adopt the use of Hornbury's patent corrugated iron latrines. (28) To have the latrines for females attended to by methranis only. (29) To tar the gumlahs, the drains, and the walls of the public latrines up to three feet high twice a month. (30) To properly carry out the dryearth system in all the latrines and require the mether to pour a sufficient quantity of dry earth in the gumlah after it has been used. (31) With the increase in public latrine accommodation to adopt stringent measures, and make every endeavour to put down promiscuous defectation. Also to require the police, under section 365 of the Municipal Act, to discharge this part of their duty properly and satisfactorily. (32) To take early steps to introduce Part IX of the Municipal Act. (33) To early consider the question of providing trenching grounds, and to secure suitable plots of land for this purpose conveniently situated with reference to the public latrines and the different parts of the town. Also to induce with reference to the public latrines and the different parts of the town. Also to induce cultivators to make over their banks for shallow trenching (34) To have the trade in dried fish of evil odour carried on outside the public markets. (35) To provide another exit for the mether from the Feringhee Bazar latrine. (36) To require the owners of the private markets to remedy the defects pointed out, and take steps generally for improving the condition of these places. (37) Not to allow the killing of cattle at all places. Also to consider the advisability of establishing a proper municipal slavether house. (38) To have many of the the advisability of establishing a proper municipal slaughter-house. (38) To have many of the private graveyards permanently closed, interments being permitted in very exceptional cases, and to require the owners of the grounds to be closed to plant them with trees. (39) To provide in their stead one or two public burial-grounds outside the town. (40) To close the Christian cometery near the old Catholic chapel, which is situated among the houses of the Europeans. (41) To see that in the public graveyard bodies are buried in lines with fixed appares between each grave and each row of graves, and that one part of the ground is used before spaces between each grave and each row of graves, and that one part of the ground is used before another is taken up. (42) To have the graves dug sufficiently deep, so that the chupper, which is usually placed over the Mahomedan dead, may be at least four feet below the surface of the ground. (48) To carefully supervise the burial-grounds and keep them in good order. -(44) To introduce the Compulsory Vaccination Act, and put the town in a state of perfect protection. (45) To take steps to efficiently administer the Compulsory Registration Act, particular attention being paid to fully utilising its penal provisions. (46) To specially appoint a man to detect and report for punishment all evasions by the people of the requirements of the above-named enactment. (47) To require the municipal overseers and the tax-collectors to report births and deaths as a check on voluntary registration. (48) To introduce the hath-chitti system. (49) To induce the midwives to give information of the births which they attend.

Action taken on the suggestions:—It was resolved (1) To introduce Part IX of the Municipal Act. (2) To strictly enforce section 243 of the above-named enactment. (3) To put in order next year the main lines of metalled traffic roads. (4) To make provision in the next budget for watering roads and rolling them. (5) To carefully level the drains when roads are repaired. (6) To refuse permission to manufacture bricks at Baidnath

garden. (7) To fill up pits and hollows, and connect them with drains as far as practicable. (8) To employ extra coolies to level the drains and keep them clean. (9) To enforce section 261 of the Municipal Act, and introduce the license system for carrying on certain offensive and dangerous trades. (10) To cause, under section 254 of the said Act, the existing burial and burning-grounds to be registered. (11) To inform the people by notice as well as by beat of drum that they may place rubbish, &c, on the sides of the public roads adjacent to their houses between 4 a.m. and 8 a.m. for removal by municipal methoss.

Darjeeling Town.—Inspected in May and June 1886.—I visited the town in company with Mr. Clark, the Vice-Chairman, the municipal Overseer and the Inspector being also present on some of the inspections, and found that the general condition of the place was fairly satisfactory Many improvements had been effected since it was last visited. and it was evident that the Commissioners had been taking commendable interest in the sanitary welfare of this, the only sanitarium of Bengal.

The suggestions &ers—(1) To take a complete census of the town and communicate its result to this office. (2) To annually spend more money than 8:15 per cent. of the income to carry out permanent sanitary improvements, and place every part of the town on a thoroughly sound sanitary footing. (3) To strictly enforce the sections of Part VI of the Municipal Act, which relate to building regulations. (4) To keep the fencing of the station roads in good repair. (5) To have the target set up on the Victoria road for the use of the police removed. (6) To permit the bunniahs to erect tents and small huts to serve the purposes of shops on the roadsides only in places where there is no danger of a horse going flown the khud. (7) To pay great attention to the general cleaning of the neighbourhood of houses in the villages of Choom and Jore Bungalow. Also to see that proper drainage arrangements are made in front of and between houses in the Choom village, and to have all rubbish, where possible, collected in boxes and removed by the sweepers, and in other cases dragged by the sweepers down hill to the bottom of jhoras. (8) To keep the house drains in the bazar, and specially those between contiguous houses, which are often made of wood with imperfect joints, in proper working order. (9) In every way to aim at an increase of the water-supply of the town, and not the artificial limit of the present supply which is insufficient. (10) To have the cost of supplying the people living on the western end of Choom village with pipe-water estimated for in next year's budget. (11) To provide properly constructed bathing platforms at convenient places. (12) To have the eess-pits into which the kitchen refuse is collected regularly and properly cleaned. (13) To have the cattle pound regularly cleaned out, and permit no accumulation of dung. (14) To provide more public latrines at convenient places for the exclusive use of females. (15) To, put up corrugated iron urinals at places most frequented by the people. (16) To take steps to pu

Naraingunge Town—Inspected in August 1886.—Much had been done since last inspection to improve the sanitation of this important town, and the Commissioners seemed fully alive to its wants, and were displaying great interest in its sanitary welfare. There were, however, still many grave defects calling for early rectification.

The suggestions were—(1) To continue to devote annually a fair and equitable share of the income to place every part of the town on a sound sanitary footing. (2) To fully utilise section 227 of the Municipal Act, as well as those sections of Part VI of it which relate to building regulations. (3) To construct a regular road along the river bank on the Madungunge side behind the places of business. (4) To gradually provide pucca shallow saucer-shaped side-drains in the growded localities and along the principal thoroughfares, and to make arrangements for connecting all house drains with them. (5) To see that the plinths of all huts and houses are raised well above flood level. (6) To advise the owners of all filthy pits to keep filling them up every cold season with earth from without the limits of the town. (7) To have the holes in the railway compound at the ghat filled up, and to instruct the company to put it in preper order. (8) To fully utilise street-sweepings and the solid refuse from houses in filling up pits and holes when they are at a distance from the kahitations of the people. (9) To consider the advisability of acquiring some of the excavations and converting them into tanks, the earth which would then become available being employed in filling up smaller holes around. (10) To have the pits connected, as far as practicable, with one another and with the khalls. (11) To annually set apart a small position of the income for filling some of the filthy excavations and hollows with mud and sand from the river churs during the dry season. (12) To see that the drains are not silted up and overgrown with grass. (13) To have the kutchs deep drains converted gradually into puccase shallow ones. (14) To try to improve the condition of the house drains. (15) To construct a small bank or a raised road along the west side of the Lyall's tank to prevent the drainage from Mesers. Ralli Brothers' cooly lines finding its way into it. (16) To prohibit the erection

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of latrines ir close proximity to the private tanks, and take steps to have the existing ones removed, where possible, to a safe distance. (17) To strictly forbid defocation on the banks of the river. (18) To have the conservancy establishment strengthened as proposed, and the number of rubbish carts increased. (19) With the increase in the establishment to take steps to have all the lanes and by-paths swept daily. (20) To provide barrel-carts for the removal of fluid house and kitchen refuse to the trenching grounds for disposal. (21) To erect small iron latrines for the exclusive use of females, and to have them attended to by methranis only. (22) To induce the well-to-do class of the people to provide for themselves proper surface privies. (23) To put up corrugated iron public urinals at convenient places. (24) To make persevering endeavours to put down promiscuous defocation. (25) To carry out the trenching system in the manner described in the last Inspection Report. Also to consider whether during the rainy season it would not be possible to discharge all night-soil into the river beyond the town by means of a hopper barge, the discharge being made at the time of ebbtide. (26) To require the owners of the two markets which were not in proper order to provide them with pucca floors and drains. (27) To establish a municipal slaughter-house on a small scale with proper drainage, water-supply, and other conveniences, and to prohibit the killing of cattle at any other place. (28) To have the graves dug sufficiently deep, so that the chapper, which is usually placed over the Mahomedan corpse, may be at least four feet below the surface of the ground and not six inches to one foot as at present. (29) To fully utilise the provisions of the Compulsory Vaccination Act after it has been introduced, and to appoint a municipal vaccinator to carry on operations within the limits of the town. (30) To adopt measures generally to secure accuracy in registration. (31) To induce the midwives to give information of all birth

Action taken on the suggestions:—(1) The railway authorities have been requested to fill up the low places in the railway compound. (2) The owners of the markets have been served with notices to make the floors and drains of these places pucca, and to provide proper privies and urinals near them. (3) The conservancy establishment has been increased by ten methers and eight methranis. (4) Parts of the surface drains by the sides of the Eastern and the Sitallakhya roads are being made pucca. (5) A. paid vaccinator has been employed, and

vaccination registers are being kept by the registrar of births and deaths.

Dacca Town—Inspected in August 1886.—I was accompanied by Mr. Sarkies, the Secretary to the Municipality, during my inspection, and saw the various municipal subordinates in different parts of the town. It appeared that the general condition of the town was anything but satisfactory. Grave defects requiring urgent attention were seen on all sides. The drainage was exceedingly defective—there were no drains at all in several places, and those that existed were much encroached upon, and in many instances no better than elongated cess-pools. The water-supply of large portions of the town, which were still dependent on tanks and wells for drinking water, was very bad. The conservancy arrangements were, equally unsatisfactory, being in fact totally incommensurate with the needs of the town. The abominable well-privies and the sundasses still existed in numbers and helped to lower the health status of the place. In fact Dacca, though somewhat improved as to roads and water-supply, was still in a horribly insanitary state. There was, however, evidence that the sanitation of the town had engaged the attention of the Commissioners, and that something was being done to improve it. It was satisfactory to find that many filthy gors had been and several were being filled up. Baboo Iswar Chundra Das continued to manifest great interest in the sanitary welfare of that the nanonal proposed at his cost, amounting to Rs. 800, a lane from Allagully road to Pattakhan lane. The action of Baboo Bhojohari Shaha in converting a footpath into a lane fit for carriage traffic also deserved much praise,

The suggestions were—(1) To annually devote a fair and equitable share of the income for carrying out permanent sanitary works and placing every part of the town on a proper sanitary footing. (2) To consider the advisability of selling off the lands belonging to the Municipality, and of employing the proceeds in undertaking several important schemes, such as the extension of the filtered water-supply, the provision of an improved system of surface drainage, &c. (3) To strictly enforce the sections of Part VI of the Municipal Act which relate to building regulations. (4) To make arrangements for metalling a certain length of the kutcha roads every year. (5) To adopt measures to deal effectively with all encroachments upon drains. (6) To provide pucca shallow saucer-shaped side-drains along the principal streets and growded thoroughfares and lanes. (7) To take steps to gradually ameliorate the condition of the bustis, to have these places efficiently surface drained and gradually opened out, and to make proper conservancy arrangements for them. (8) To do the best to carry out the suggestions made under the head of drainage in the last Inspection Report. (9) To fully exercise the powers given by law and prevent the drains being further encroached upon, disposing of the existing obstructions in the best way possible. (10) When the platforms over the drains are long, to require their owners to provide man-holes in them at convenient distances. (11) With the provision of an efficient system of drainage, to take steps to improve, as far as practicable, the condition of the house drains. (12) To consider the advisability of extending the filtered water-supply to the whole town as eson as possible. (13) Not to allow the private tanks to be polluted by house drains opening into them and become a source of danger to health. (14) To induce the owners of such tanks as cannot be maintained in proper order, to have them filled up with mud and sand from the river churs during the dry season. (15) After the extension of the fil

and increase the number of carts and draught cattle, and to have the work of the staff sufficiently closely supervised and full amount of work taken from each man. (17) To compel the people to bring out all house-rubbia and put it on the roadside at stated hours for removal by the conservancy carts, and dispose of the existing accumulations within house enclosures at the cost of the cwenes. (18) To have all the lanes and by-paths swept every other day, if not daily and the sweepings regularly removed. (19) To provide a sufficient number of barrel-carts for the semoval of fluid refuse from houses to the trenching ground for disposal, until such time as the refuse can be discharged into puoca drains. (20) To include the drains within surface cleansing, and thus keep them permanently clean. (21) To have the pig-sty removed beyond the limits of the Municipality. (22) To attend to the recommendations made in the last report regarding the provision of more public latrines at convenient places, and particularly for females. (22) To keep the existing public latrines scrupulously clean and sweet, and to hold the Conservancy Inspector and the Jennadars responsible for their cleanliness. (24) To have broken brick laid down round most of the public latrines, as the cart wheels sink in new tweather. (25) To put up corrugated iron public urinals in the crowded, localities. (26) To adopt measures generally to discourage promiscuous defeccation as far as possible. (27) To make sustained efforts to suppress the well-privies and the sundasses, and to oblige their owners to build for themselves proper surface privies. Also to encourage the use of corrugated iron privies of Hornbury's patent. (28) To strictly enforce section 225 of the Municipal Act, and to require the owners of privies that are exposed to public view to have them properly enclosed, whether they are complained against or not. (29). To open more trenching grounds at convenient places. (30) To carry out the trenching system in the manner recommended in the last Insp

Action taken on the suggestions:—(1) The public latrines and the urinals are being kept well tarred. (2) A large number of sundasses and well-privies have been closed, and steps are being taken to do away with this evil gradually. (3) Some of the gors have been, and some others are being, filled up. (4) The extension of the filtered water-supply is under the consideration of the Commissioners. (5) Steps are being taken to properly drain wards I and II

Nasirabad Town—Inspected in August 1886.—The sanitary arrangements of this town were not satisfactory. Foul pits and water-holes abounded all over the place to the detriment of the public health. The drainage and the conservancy arrangements were very defective, and the water-supply was not sufficient for the requirements of the whole community. It was, however, satisfactory to find that the Commissioners were fully alive to their responsibilities and were exerting themselves to remedy the existing defects.

The suggestions were—(1) To continue to devote year after year an equitable share of the

The suggestions were—(1) To continue to devote year after year an equitable share of the income for rectifying the existing defects and placing the town on a proper sanitary footing.

(2) To have a certain length of the kutcha roads metalled every year. (3) To make persevering endeavours to fill up all the pits and excavations in the manner recommended in the last Inspection Report. Also to connect them with one another and with the drainage outlets. (4) To annually set apart a small portion of the income for filling in some of the pits during the cold weather with earth from the river bed. (5) To remove the silt from the drains in such a manner so that the proper slopes for drainage are not interfered with. (6) To begin constructing pueca drains and to carry out the scheme gradually, and to see that the drains are shallow and of saucer shapes (7) To come to an understanding with the civil authorities regarding the bunding up of water for agricultural purposes in the khals leading to the bheels. (8) To fully exercise the powers conferred on the Commissioners by the Municipal Act of 1884 for removing all obstructions to and encroachments upon drains (9) Not to allow the weeds taken out from the tanks to be heaped up on the banks, but to have them entirely removed and used in filling up hollows. (10) To prevent the bank of the river being resorted to for purposes of nature. Also to have the private privies along the bank closed or removed to a safe distance, or with the assistance of Part IX of the Municipal Act kept perfectly clear by the sanitary establishment. (11) To give effect, as far as practicable, to the recommendations made in the last Inspection Report under the head of conservancy. (12) Not to permit cow and cattle ordure to be collected within house enclosures, but to have it either converted into cakes for fuel or deposited in the fields as manure. (13) To keep the public latrines scrupulously clean and sweet, and to require the overseer

to pay more attention to them, so as to make them popular. (14) To have the holes in the new puoca latrine, through which the foeces drop, more elongated to prevent their edges getting fouled. (15) To adopt in place of masonry structures the iron latrines called Hornbury's pattern and sold by Messrs. Burn & Company of Calcutta. (16) With the increase in public latrine accommodation to endeavour to put down promiscuous defectation. (17) To have the trenches in which night-soil is buried, dug only one foot deep and one foot wide and a foot or eighteen inches apart. Also to cause the trenches to be dug as required, so that they may not fill with water in the rainy season. (18) To keep all places where food is sold scrupulously clean, and permit no accumulation of filth of any kind in them. (19) To make full use of section 250 of the Municipal Act, and try to prevent the sale of unwholesome food or drink. (20) To see that in the public graveyards bodies are buried in rows, a certain space allotted to each grave; and that in the case of the Mahomedans the graves are dug sufficiently deep, so that the chupper may be placed at least four feet, and not one cubit only as at present, below the surface of the ground. (21) To prohibit all intramural burials. (22) To have the clothes, mats, &c., of the deceased always destroyed by fire. (23) To require the owners of the serais to remedy the defects pointed out. Also not to allow the fluid refuse from these places to flow into the river, but to have it removed in barrel-carts to the trenching ground for disposal. (24) To fully utilise the provisions of the Compulsory Vaccination Act after it comes into operation. (25) To take steps to carry out the suggestions offered under the head of registration in the last report. (26) To require the tax-collectors and the overseers to interest themselves in reporting births and deaths.

Comillah Town—Inspected in August 1886.—I went round the town with the Vice-Chairman, who seemed much interested in its sanitary concerns. Very few improvements were seen to have been effected since it was last visited in December 1880. While, on the other hand, there were many serious defects, particularly under the heads of water-supply and conservancy, which required early rectification. Intramural burial was permitted to be carried on to a considerable extent to the detriment of public health. Foul pits and water-holes and tanks were very numerous; in fact nearly half the area is covered by them. Jungle was at places very great and prevented free passage of air throughout the crowded parts of the town. In short, the sanitary arrangements of Comillah were far from being satisfactory.

The suggestions were—(1) To allot year after year a legitimate share of the income for placing every part of the town on a properly sound sanitary footing. (2) To strictly enforce the sections of Part VI of the Municipal Act which refer to building regulations (3) To have the sanitary clauses of the above law, as far as they are in operation, administered with the desired activity. (4) To ask the Maharaja to allow his tenants to use free of cost the mud and sand from the river bed to fill up all low-lying patches of land in their occupation. (5) To have jungle as far as possible kept down, and when it is dealt with, to have it uprooted and not cut only. (6) To have the drains regularly looked after by the municipal staff, and obstructions or accumulations of leaves causing blocks regularly removed to allow jungle to grow in the drains so as to impede the flow of water. (8) To gradually carry out a proper system of pucca drains, parts being done every year. (9) Wherever pucca drains are made, to cause all house drains to be connected with them. (10) To have small trees growing on the inward slope of Rani Dighi removed. (11) To have one or two of the better tanks that are conveniently situated, protected from pollution and reserved for drinking. (12) To carfully consider the amediency of constructing a small sluice in the embankment for introducing the flood water of the river Goomtee into as many of the tanks as possible. (13) To adequately strengthen the conservancy establishment and increase the number of carts. (14) To have the principal streets swept at least twice, and the lanes and by-paths once a week, and the sweepings properly removed. (10) To provide wheel-barrows for the proper conservancy of the narrow lanes. (16) To make proper arrangements for the regular removal of fluid refuse at least from the houses in the crowded localities. (17) Not to allow cow and cattle ordure to be accumulated within house premises, but to have it either converted into cakes for fuel or removed to the fields as manure. (18) To provide more public latrines at convenient places, and to adopt Hornbury's patent iron latrines in place of the ordinary pucca structures; put up a few of them for the exclusive use of females, and have them attended to by methranis only. (19) With the gradual increase in public latrine accommodation, to make persevering endeavours to put down promiscuous defeccation. (20) To carry out the trenching system properly. Also to establish one or two small additional trenching grounds for use for places distant from the present ground. (21) To require the owner of the market to remedy the defects in it, and take steps generally for improving its condition, as well as that of the hat kholas. (22) To establish a slaughter-house on a small scale with proper drainage, water-supply, and other conveniences, prohibit the killing of cattle at any other place, and allow none but healthy cattle to be killed for food consumption. (23) To immediately close the private graveyards that are situated within compounds of houses, and prohibit further interments in them, and to require their owners to plant them (24) To provide a public burial-ground at the outskirt of the town in place of those to be closed. (25) To see that bodies are buried deeply, the chupper being at least four feet below the surface of the ground. (26) To take steps generally to obtain accuracy in registration, and to induce the midwives to give information of all births at which they attend.

Action taken on the suggestions:—It was resolved—(1) To purchase two wheel-barrows and employ two coolies to remove rubbish and refuse from the narrow lanes. (2) To have the

principal streets swept twice, and the lanes and by-paths once a week, and the sweepings regularly removed. (3) To provide two barrel-carts for the purpose of daily removing the fluid refuse from the hostels and the Nannardighi quarter which is comparatively more crowded. (4) To forbid the coloos (cil-manufacturers) to accumulate cow or cattle ordure in places other than those for which a license may be granted to them under section 261 of the Municipal Act. (5) Instead of indenting for an iron structure of Hornbury's pattern, to construct an ordinary latrine in the bazar quarter. (6) To provide separate latrine accommodation for the two sexes when additional public latrines are erected in future. (7) To select another trenching ground in another quarter of the town, sufficiently distant from the inhabited portion. (8) To cause an enquiry to be made as to the advisability or otherwise of recalling the licenses granted to several people for burying the dead within private compounds, as well as of providing one or two public burial grounds. (9) To request the Maharaja's agents to improve the condition of the local markets, more specially Chowkbazar. (10) To have some of the minor suggestions carried out by the executive officers of the Municipality.

Julpiguri Town—Inspected in Norember 1886.—This town was found in a somewhat better state than when last visited. Some improvements were noticed to have been effected, the chief being the strengthening of the conservancy establishment; the provision of a trenching ground at a central spot; the introduction of Part IX and some of the provisions of Part VI of the Municipal Act; and the construction of two kutcha roads in the bazar, as well as a big drain at its back. There was, moreover, less jungle and less evidence of promiscuous defocation. The sanitation of the town was, however, far from being satisfactory. Grave defects existed under almost every head of sanitation; but owing to the smallness of the income, the Commissioners were unable to do much to remedy them.

The suggestions were—(1) To try to raise the income. (2) To bring into force a code of bye-laws framed under section 350 of the Municipal Act. (3) To use street-sweepings in (3) To use street-sweepings in filling up hollows and excavations. (4) To require the people to keep their house-lands free from vegetation, and when fires occur, not to permit houses being reconstructed on the existing objectionable principle. (5) To encourage the use of corrugated iron for roofing. (6) To have all encroachments over drains gradually removed, and all future permanent erections carefully watched. (7) To have the drains overhauled and put into effective working order in the cold season when labour is cheap. (8) To have the town properly surveyed, and a systemised scheme of shallow surface drains provided when funds become available. prohibit the throwing of solid house and kitchen refuse into the nearest convenient jungle, and to require the people in all cases to place such refuse on the roads to be carted away. Not to allow cattle dung to be collected in the town for manure, but to have it removed out-Not to allow cattle dung to be collected in the town for manure, but to have it removed outside daily, and kept in the fields in places convenient to the owners. (11) To see that the kutcherry latrine is cleaned every morning, and to bring to the notice of the Magistrate the defects in the building. (12) To keep the public latrines scrupulously clean, and not to tolerate the excuse put forward against their use, viz., caste and other prejudices. (13) To adopt Hornbury's patent iron latrines, sold by Messrs. Burn and Company of Calcutta, in place of the ordinary structures. (14) To fully work up the provisions of Part IX of the Municipal Act. (15) To prevent the throwing into the nearest thicket of night-soil from the privies which are not attended to by the municipal mehters, and to take such privies under municipal management under the provisions of Part IX of the Municipal Act. (16) To have the width of the trenches in which night-soil is buried reduced to one foot. (17) To require the owner of the market to make arrangements for obviating overcrowding, to remedy its defective drainage, and to keep it scrupulously clean. (18) To provide a slaughter-house as suggested in the last Inspection Report. (19) To have the order prohibiting defocation on the banks of the Kurla, as well as the throwing of feeal matter into it, energetically carried out, and of the Kurla, as well as the throwing of feeds matter into it, energetically carried out, and the offenders regularly prosecuted. (20) To have the banks of the river divided, convenient portions being reserved exclusively for the taking of water for drinking, and portions appointed for bathing and washing of clothes; the latter being lower down the river. (21) To provide the well in the bazar with a pump and bucket for raising water, and not to permit the surroundings of the pueca wells, which are largely used for drinking and culinary purposes, to become filthy. (22) To provide, whenever funds are available, properly constructed correctly, situated public wells, or to induce the people when righting new wells. ed and conveniently situated public wells, or to induce the people when sinking new wells to dig them in localities where they will not be liable to contamination from cattle-sheds. &c. (23) To observe order in digging the graves as recommended in the last report. (24) To exercise, each Commissioner in his own ward, an energetic and sustained supervision over registration, and to fully utilise the provisions, particularly the penal ones, of the Compulsory Registration Act, a person being specially appointed to detect and report for punishment all people who evade the provisions of the law.

Action taken on the suggestions:—It was reported that owing to want of funds the recommendations could not be adopted in their entirety. Something, however, had been done, and more was in progress.

Dinagepore Town—Inspected in November 1886.—This town was found in much the same state as before. Its health status was bad. There were yet many grave defects that demanded early rectification, prominent among them being the want of a proper system of drainage, to which no doubt the persistent prevalence of fever in the town is mainly ascribable. I was, however, glad to notice that the Commissioners were paying attention to the sanitary interests of the place and were trying to ameliorate its condition.

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The suggestions were—(1) To introduce, without further delay, Parts VI, IX and X of the Municipal Act which contain important sanitary regulations. (2) To have the existing bye laws that have been framed under the old Municipal Act altered so as to be in accord with the present law. (3) To gradually metal the kutcha roads. (4) To fill up pits and hollows as far as practicable, and carefully watch and prevent the making of future excavations. (5) To encourage the people and assist them by granting small contributions to fill up bad hollows containing stagnant water. (6) To remove jungle, as far as possible, by uprooting and not cutting down. (7) To consider the desirability of lighting the streets. (8) To encourage the employment of tiles and corrugated iron in roofing houses. 9) To see that in cleaning the drains the earth taken out is not placed on their sides, and to remove all vegetation from the new outlet past Mr. Beadon's house. (10) When the proposed drainage scheme is taken in hand, to induce all house-owners to convert the house drains into puoca ones and connect them with the public drains. (11) To appoint an additional jemadar to supervise the conservancy establishment. (12) To provide more public latrines at convenient places, and in doing so to adopt, in place of the ordinary latrines, the use of the iron structures of Hornbury's pattern sold by Messrs. Burn & Company of Calcutta. (13 With the increase in public latrine accommodation to adopt measures to put down promiseuous defortures of Hornbury's pattern sold by Messrs. Burn & Company of Calcutta. (10 with the increase in public latrine accommodation, to adopt measures to put down promiscuous defocation (14 To take steps to introduce Part IX of the Municipal Act, and take over all the private privies under municipal management. 15) To undertake the cultivation of the trenching grounds to demonstrate to the people the value of night-soil as manure. (16) To request the Maharaja to remedy the defects pointed out in the Chowkbazar. (17) To see that both the markets are kept in a tidy condition, and to have the sweepings carried in the latest property of the conservation of the expedite the contemplated prowheel barrows for removal by the conservancy carts, and to expedite the contemplated prowheel-barrows for removal by the conservancy carts, and to expedite the contemplated provision of drains in the markets. (18) To provide an urinal at Chowkbazar. (19) To have such of the private tanks as have now become mere ditches and hollows containing foul water gradually filled up. (20) To have all middens and house refuse removed to a safe distance from the tanks. (2) To have the ground around at least the public wells sloped so as to allow of the spill water running to the nearest drain. Also to supply them with pumps or buckets (22) To adopt stringent measures to prevent the banks of the rivers Gogra and Purnabhava being fouled. (23) To supplement the present water-supply by the provision of a sufficient number of deep and conveniently situated wells, and the reclamation of some of the best tanks. (24) To abandon the Mahomedan burial ground on the roadside across the Gogra, and to provide another in its place, and to adopt on the roadside across the Gogra, and to provide another in its place, and to accept in the new ground the plan of interments suggested in my last report (25) To see that the burial-ground for the Christians is well cared for by the mali in charge. (26) To have the clothest mats, &c., of the deceased destroyed by fire along with the body. (27) To carethe clothes, mats, &c., of the deceased destroyed by fire along with the body. (27) To carefully work the provisions of the Compulsory Vaccination Act which has been, or will shortly be, introduced. (28) To fully utilise the provisions of the Compulsory Registration Act, and to re-appoint the person who was entertained to detect evasions of its requirements. (29) To require the overseer, the tax-collector and the buxi to pay closer attention to this part of their duty. (30) To accord, each Commissioner in his own ward, interested and sustained co-operation in placing registration on a satisfactory footing.

Rungpore Town-Inspected in November 1886.—The large number of sanitary improvements that were found to have been carried out since last inspection, or during about a single year, reflected much cred and the Commissioners. It was evident that the sanitation of the town was being carefully in ked after. Much, however, yet remained to be done to place the town on a satisfactory sanitary footing. The drainage, though considerably improved, was still very defective, and the arrangements under the head of conservancy were most unsatisfactory, and in some cases highly objectionable. Other insanitary conditions

requiring immediate attention abounded and helped to render the place unhealthy

The suggestions were—(1) To continue to rectify the defects that yet exist. (2) To require the methers to give a month's notice before quitting service. (3) To act upon the regulations relating to the carrying on of offensive and dangerous trades. (4) To metal the kutchs roads as funds become available. (5) To provide cross roads at places where they are wanted. (6) On the occurrence of fires to permit no reconstruction of houses on the old objectionable plan (7) To see that the fall in the drainage channels is sufficient to allow of a quick current. Also to improve the levels of the subsidiary drains. (8) To enlarge the bridges, such as Girdhari Lall Roy's bridge, and have their floors lowered and kept free from silt and jungle. (9) To provide a culvert under the central road close to Dhapbazar. (10) To have the tanks and hollows connected, as far as practicable, with the drainage system. (11) To extend the saucer drain in Mahigungs to both sides of the principal street and to some of the side streets. (12) To keep the existing drains clear of rubbish, sweepings, silt and growing vegetation, and in proper working order. (13) To adequately strengthen the conservancy establishment, increase the number of carts and barrows and have the establishment properly supervised. (14) To the number of carts and barrows and have the establishment properly supervised. make arrangements for properly disposing of fluid refuse from houses, and prevent its being thrown into the nearest convenient pits and hollows. (15) To keep the public latrines in good repair, and provide them with drains to carry off washing water. (16) To provide more public latrines at convenient places, and in doing so to introduce the iron structures of Hornbury's patent to be obtained from Messrs. Burn and Company of Calcutta. (17) To induce the people to construct privies for themselves on an approved plan. (18) To take all the private privies under municipal management, levy a fee for the service rendered, and fully utilise the provisions of Part 1X of the Municipal Act. (19) With the increase in public larrine accommodation, to try to check promiscuous defocation. (20) To provide some public urinals. (21) To have all the night-soil of the town trenched, and prohibit its being disposed of otherwise. (22) To carry out the trenching system properly, the trenches being dug in lines one foot wide and one foot deep, and only so much night-soil put into them as will admit of a layer of earth being placed over it. (23) To provide a properly-constructed and well-supervised municipal market. Also to construct a slaughter-house as suggested in the last report. (24) To have the European medicinal drug shops registered, and see that certificated compounders are attached to them. (25) To supply the public wells with pumps and buckets for raising water, and prohibit the dipping of private vessels into them. (26) To excavate no new tanks and have the existing ones filled up. (27) To prohibit the appropriation of the clothes, pillows, &c., of the deceased by the chamars, and have them invariably burnt along with the body. (28) To open another office at Mahigunge for the registration of births and deaths. Also to continue to manifest the desired interest in the matter, and to appoint a person to detect evasions of the provisions of the Compulsory Registration Act.

Bogra Town—Inspected in Nevenber 1886.—The sanitary condition of this town was unsatisfactory. Grave defects existed under almost every head of sanitation. The drainage was very defective, and the conservancy arrangements as bad as possible. The water-supply for drinking was found to run short during the hot and dry season, and was moreover generally of an inferior quality. There was dense jungle at places which prevented free perflation of air. I was, however, glad to notice that something had been done since last inspection to improve the health status of the place, and that the Commissioners were fully sensible of its requirements, and were willing to gradually meet them.

The suggestions were—(1) To employ Ranigunge pipes in the place of bamboo bridges which soon fall into disrepair. (2) To impress upon the people the advantages of using corrugated iron for roofing when building new houses in crowded localities. (3) To see that the surroundings of the houses are kept clean and tidy, and make every effort to uproot and check the growth of low jungle. (4) To prevent the casting of rubbish into the drains, and to steadily attend for a few years to the uprooting of jungle from them. (5) To consider the drains of sider the desirability of providing a proper system of pucca surface drains, and making a beginning in this direction at once, and extending the scheme year after year, as funds become available. (6) If the above suggestion is carried cut, to take steps to have all house drains connected with the public drains. (7) To adequately strengthen the conservancy establishment, and increase the number of carts, bullocks, &c. (8) To have all the streets swept daily, and see that when the proposed hand-barrows are provided, the lanes and by-paths also receive this attention. (2) To fully utilise all sweepings in filling up pits and hollows when they are at a distance from the habitations of the people. (10) To prevent the collection of house and kitchen refuse—solid and liquid—in pits close to the houses, and see to their proper disposal. (11) To supply an additional gumlah to each cell of the public latrine. (12) To bring to the notice of the Magistrate the faulty construct of the kutcherry latrine, owing to which ho gumlah can be used in it. (13) To construct more public latrines at convenient places, and set apart some for the exclusive use of females. Also to give a trial to one or two of Hornbury's patent iron latrines, obtainable from Messrs. Burn & Company of Calcutta, before providing latrines of the ordinary type. (14) To take the necessary steps to introduce Part IX of the Municipal Act without delay, and when this measure comes into force, to require the owners of well-privies to close them, and provide in their place properly-constructed surface privies on an approved plan, and to undertake the management and cleansing of all private privies, and levy a fee for the service rendered. (15) To enquire from the Commissioners of any of the following municipalities, viz., Burdwan, Howrah, Hugli, Darjeeling, Dacca, Naraingunge or Comillah, as to the modus operandi observed by them in working Part IX of the Municipal Act. (16) To prohibit the throwing of the night-soil from the private privites into hollows or jungle, and have it trenched in the ground set apart for the purpose. (17) To provide some more trenching grounds at convenient places, and carry out the trenching system in the manner recommended by me. (18) To take steps, as soon as possible, to introduce Part X of the Municipal Act. (19) To consider the advisability of providing a slaughter-house on a small scale as suggested in my last the advisability of providing a slaughter-house on a small scale as suggested in my last Inspection Report. (20) To cause all brushwood and trees to be removed from the banks of some of the private tanks, and all weeds from the water. (21) To have the pucca pillars and arches at the tank on the Mahtidally road repaired. (22) To induce the people to convert the kutcha unprotected private wells into deep pucca ones. (23) To have the wells situated in proximity to well-privies and cattle-sheds closed. (24) To move the Magistrate in the matter of having the dried-up portion of the bed of the river Karatoya near Govindguage opened up with the help of some of the leading zemindars of Bogra and Rungpore. (25) To have the clothes, pillows, &c., of the deceased burned with the body and not buried. (26) To fully utilise the provisions of the Compulsory Registration Act, and enforce its penal clauses. (27) To specially appoint a person to detect and report evasions of the provisions of this law by the people. (28) To induce the tax-collectors, overseers, &c., to pay more careful attention to ascertaining and reporting the occurrences of births and deaths. careful attention to ascertaining and reporting the occurrences of births and deaths.

Rampore Beauleah Town—Inspected in November 1886.—The general condition of this town was far from being satisfactory. It was found to be so riddled with filthy tanks and water-holes, and, except in the riverside, so devoid of a good water-supply, that a high standard of health could not be looked for. The conservancy arrangements were very defective, and in some instances highly objectionable, and some of those under the head of markets and slaughter-houses were so bad as to merit the strongest condemnation. There

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were also several other defects which called for early attention. I was, however, glad that the improvements effected since last inspection, though not commensurate either with the requirements of the place or with the means at the disposal of the Commissioners, indicated that the Commissioners indicated

that the Commissioners were not unmindful of its sanitary concerns.

The sungestions were—(1) To annually devote, in accordance with the orders of Government on the subject, the greater portion of the amount over Rs. 3,200 set free by the Municipality having been relieved of pelice charges, as well as an equitable share of the remaining income having been relieved of pelice charges, as well as an equitable share of the remaining intended for rectifying the existing defects and placing the town on a satisfactory sanitary footing. (2) To consider the expediency of slightly raising the taxes. (3) To metal every year a certain length of the kutcha roads. (4) To adopt the use of Ranigunge pipes for small cross-drains and drains under house entrances. (5) To ask the dwellers in the civil station to keep their compounds free from jungle. (6) To persevere in filling up foul pits and hollows, and to do it with sand from the river bed, a few every year. (7) To have all the hollows and depressions into which river water can be conveyed connected with one another. (8) To have the holes that are intended to be filled in with rubbish and street-awarenings first dewatered, and to take that are intended to be filled in with rubbish and street-sweepings first dewatered, and to take up only so many of them at a time as could be dealt with within a short period. (9) To make a beginning in the direction of providing pucca shallow saucer-shaped drains in the crowded localities and along the important streets, and to extend them gradually, a certain length being done every year. (10) To obliterate such of the tanks as are filthy or useless or cannot be maintained in proper order. (11) To acquire one or two tanks and have them re-excavated, properly protected from pollution and inward drainage, and exclusively set apart for drinking. (12) To consider the desirability of providing one or two of Norton's tubular wells in inland places to test the quality of the water obtained. (13) To give effect, as far as practicable, to the suggestions offered under the head of conservancy in the last. Inspection practicable, to the suggestions offered under the head of conservancy in the last Inspection Report. (14) To increase the number of rubbish carts. (15) To cause greater activity to be shown by the Conservancy Department, which does not do full work. (16) To remove the pigstys beyond the limits of the Municipality. (17) To provide more public latrines at convenient places, and to have those for females entirely apart. Also to try a few of Hornbury's patent iron latrines sold by Messrs Burn and Company of Calcutta. (18) To keep the public latrines scrupulously clean and sweet, and to hold the Conservancy Inspector responsible for their clean-lines. (19) To at once stop the obnoxious practice of throwing night-soil into jungle, &c., and systematically prosecute the offenders, and to have all night-soil from the latrines which are attended to by private methers removed and trenched either in the grounds set apart for the purpose, or at any other place outside the town. (20) To persevere with the removal of privies from the banks of tanks. (21) To take steps to introduce Part 1X of the Municipal Act to the whole town. (22) To keep the Saheb Bazar scrupulously clean as to removal of rubbish, state of drains, and repair of road, and never to allow the latrine attached to it to become offensive. Also to require the owners of this as well as of the other moval of rubbish, state of drains, and repair of road, and never to allow the latrine attached to it to become offensive. Also to require the owners of this as well as of the other market to make proper conservancy arrangements for these places, and to gradually make their drains and floors pucea. (23) To consider the question of prohibiting the sale of unwholesome food or drink. (24) To carry out, as soon as possible, my recommendations under the head of slaughter-houses made in last year's report. (25) To make further inquiries for a site for a proper slaughter-house somewhere out of the town to the north. (26) To have the offal, &c., buried in the trenching ground and not cast into the river. (27) To give effect to my recommendations made in the last report regarding the burial-ground at Ramchunderpore. (28) To give only suppress the private graveyards and establish, if required, another public ground at some convenient place. (29) To insist upon deep burials, and see that the chapper is always four feet below the surface of the ground. (30) To restrict within the narrowest possible limits the practice of burying the dead in compounds of houses. (31) Not to permit nor tolerate the appropriation in some cases by the domes of the clothes. (31) Not to permit nor tolerate the appropriation in some cases by the domes of the clothes, pillows, &c., of the deceased. (32) To have the Compulsory Vaccination Act administered and enforced in all its particulars, and to make full use of its penal provisions. (33) To advantageously utilise the agency of the tax-collectors for reporting births and deaths as a check on voluntary registration, and to induce the midwives to give information of all births at which they attend.

Action taken on the suggestions.—The recommendations made are under the consideration of the Commissioners.

Pubna Town—Impected in November 1886.—I was very glad to notice the large number of improvements carried out since my last visit in November 1885, and the firmness in administration shown with regard to the introduction of important sanitary measures in in administration shown with regard to the introduction of important sanitary measures in the face of considerable opposition from the people. There were, however, still many grave insanitary conditions which required urgent attention. The great nuisance of foul pits and water-holes had yet to be dealt with. The drainage was extremely defective and nearly in the primitive state, and the conservancy arrangements, though considerably improved, were not yet satisfactory. The question of water-supply was daily assuming a serious aspect by the rapid silting up of the river I chamutty, and had still to be grappled with.

The suggestions were—(1) To accord most careful consideration to the matter relating to the talling off in the revenue. (2) To continue to devote year after year an equitable share of the income for rectifying the existing defects and placing the town on a proper sanitary footing. (3) To make full use of the important sections 227 and 232 of the Municipal Act. (4) To metal a certain length of the kutcha roads every year. (5) To widen the culverts and bridges across several of the roads. (6) To have as many of the holes as possible connected by channels with one another and with the river. (7) To offer the local

zemindar an annual sum for permission to take sand and earth from the river bed. (8) To consider the desirability of acquiring some of the hollows that are conveniently situated and converting them into tanks, taking up one every year, and utilising the earth which would then become available for filling in smaller holes around. Also to induce the rich owners of some of the pits to treat them similarly. (9) To solicit the Executive Engineer's assistance for the preparation of a drainage scheme for the town, and after it is done, to proceed with such parts as funds permitted, year by year, until it was completed. (10) To require the owners of the platforms over the drains in the bazar to provide man-holes in them at convenient distances to enable the methers to properly clean the drains. (11) To guard against the people washing their clothes in the municipal tank set apart for drinking. (12) To try to prevail upon the wealthier classes of the people to re-excavate some of the filthy tanks belonging to them, or to fill these up with mud and sand from the river churs during the dry season. (13) To provide around the mouths of all the municipal wells good protective masonry parapets and platforms surrounded by a pucca shallow saucer drain having connection with another drain to carry off spill water to a good distance from the wells. (14) To prohibit the dipping of private vessels into the public wells. (15) To consider the advisability of removing the chamars from the neighbourhood of the newly-built pucca wells. (16) To give effect, as far as possible, to the suggestions offered under the head of conservancy in my last Inspection Report. (17) To supply one or two barrel-carts for the removal of fluid house and kitchen refuse to the trenching ground for disposal. (18) To construct, as proposed, one or two public latrines every year till their number is sufficient for the requirements of the town. (19) To bring to the notice of the civil officer of the station the need for a latrine and a urinal for the public offices here. (20) To deal vigorously with the well-privies or sundasses as discovered, and require their owners to construct surface privies in their place. (21) To try to obtain by exchange a plot of land for trenching purposes more conveniently situated than the present ground. (22) To cause the other fish market to be provided with masonry drains and floors, as well as a good supply of water. Also to require their owners to gradually improve the general condition of these places. (23) Not to lose sight of the question of establishing a public slaughter-house which was suggested in the last report. (24) To see that the proposed burial-ground for the Mahomedans is situated at the outskirt of the town well away from the inhabited quarter. (25) To early attend to the recommendations made in the last report under the head of disposal of the dead and relating to the order of burial and the depth of the graves. (26) To the dry season. (13) To provide around the mouths of all the municipal wells good prodisposal of the dead and relating to the order of burial and the depth of the graves. disposal of the dead and relating to the order of burial and the depth of the graves. (26) To have the road from Tartibad leading to the municipal graveyard raised. (27) Not to allow the clothes, pillows, &c., of the deceased to be left on the bank of the river, but to have these in every case completely destroyed by fire along with the body. (28) To at once stop the reprehensible practice of throwing uncremated or partially cremated bodies, as well as the Hindu pauper dead, into the river. (29) To carry on vaccination actively. (30) To require the registrar to devote a few hours daily to go round the various wards alternately and try to detect evasions of the requirements of the Compulsory Registration Act. (31) To utilise the agency of the tax-collectors and the overseers to obtain reports of births and deaths as a check on voluntary registration. (32) To pay proper attention to collecting the birth statistics, and to induce the midwives to give information of the births which they attend. attend.

Jessore Town—Inspected in November 1886.—There had been very little advance in the sanitary condition of this town since last inspection. The few sanitary works that were seen to have been carried out were quite insignificant, and moreover incommensurate with the length of period—nearly two years—during which they had been accomplished. In fact almost the same defects that had been noticed before were still observable.

The suggestions ucre—(1) To allot year after year a fair share of the revenue for rectifying the defects that yet exist as well as for carrying out permanent sanitary improvements. (2) To see that the municipal laws and bye-laws are strictly administered. (3) To have a certain length of the kutcha roads metalled every year. (4) To keep down jungle as much as possible, and be careful not to allow the cut and rocted-up plants to rot on the spot, but either to utilise them in filling up pits or holes, or to burn them on the ground. (5) Not to allow rubbish to be cast into the drains. (6) To properly repair the pucca drains in the bazar. (7) To gradually extend the system of pucca shallow saucer-shaped drains, particularly in the crowded localities and along the principal streets, parts being done every year. (8) To have the tanks set apart for drinking properly profected from pollution. (9) To see that the leaves of the trees near the Lal Dighi do not find their way into the water. (10) To have the latrines that are within 50 feet of some of the public tanks removed to a safe distance. (11) To keep more tanks clean for drinking supply, and permit no inward drainage to them. (12) To induce the rich owners of some of the foul tanks to have them redug, thoroughly protected from pollution, and reserved for drinking, utilising the earth which would then become available for filling in smaller holes around. (13) To give early effect to the suggestions offered under the head of conservancy in the last Inspection Report. (14) To have the conservancy establishment strictly supervised by the overseer, and the proper removal of night-soil and rubbish ensured. (15) To properly remove the jungle and the accumulation of rubbish and filth about the houses in the town. (16) Not to allow cow and cattle ordure to be accumulated within house gremises, but to have it either converted into adopt the iron ones of Hornbury's pattern sold by Messrs. Burn and Company of Calcutta. (18) To regularly tar the gumlahs, the drains, and the wall

feet high. (19) To strictly require the methers to bring all night-soil as well as fluid refuse from the privies to the trenching ground for burial. (20) To cultivate the present trenching ground with plantains. (21) To see that the private market is gradually provided with pucca floors, and to require the owners of the bi-weekly market-place to keep it scrupulously clean. (22) To construct a public slaughter-house on a small scale with proper drainage and water-supply and other conveniences, and to prohibit the killing of cattle at any other place. Also to allow none but healthy cattle to be killed for food consumption. (23) To represent to the priest in charge to keep the Roman Catholic burial-ground free from jungle. (24) To at once stop the practice of burying at random, and to always insist upon burials in lines with fixed distances between each grave and each row of graves. (25) To see that the chapter in the Mahomedan graves is placed at least four feet below the surface of the ground. (26) To fully utilise-the provisions of the Compulsory Vaccination Act, particularly its penal clauses. (27) To make full use of the Compulsory Registration Act, and specially appoint a man to detect and report all omissions of the requirements of the law. (28) To require the municipal servants, such as overseers and tax-collectors, to report births and deaths as a check on voluntary registration. (29) To adopt the hath-chitti system, which is in vogue in several other towns in Bengal. (30) To induce the midwives to give information of all births which they attend.

Khulna Town—Inspected in November 1886.—This town remained in almost the same condition as when inspected some two years ago. I did not observe any improvement in drainage or conservancy. Want of funds no doubt seriously hampered the endeavours of the Commissioners to do much in this direction. It was, however, evident that the Commissioners were interesting themselves in the welfare of the town entrusted to their care.

The suggestions were—(1) To devise some means for increasing the municipal revenue.

(2) To take stops now to properly lay out this new municipality. (3) To strictly enforce section 232 of the Municipal Act, and prevent the making of excavations for taking earth for house plinths, or storing offensive matter therein. (4) To see that the sanitary clauses of the Municipal Act are administered with the desired activity and minuteness. (5) To make arrangements for metalling a certain length of the kutcha roads every year, and if the funds permit, to take opportunities on the occasion of fires, &c., to open out new lanes through rowded parts, and to widen the existing narrow ones. (6) To request the Railway Company to take action in the matter of draining the very extensive lands held by them, and more particularly those near the station. (7) To carefully keep the present drains in order, make no alteration of levels by digging out too deeply or irregularly, and prevent the sweepers from sweeping rubbish into them. (8) To obtain a copy of the scheme of improvement in regard to the town which was drawn up by Colonel B. Lovett, Superintending Engineer to Government, and gradually provide the necessary drains, &c., some progress being made every year. (9) To induce the owners of some of the best tauks to have them properly protected from pollution and reserved solely for drinking purposess. (10) To take stops to have the tank upon Government land near the brick-field redug, if possible, during this season. (11) To strictly prohibit defencation on the banks of the river. (12) If the Commissioners cannot afford the cost of providing proper tauks, to construct every year one or two puccas wells at envanient places, protect them from pollution, and exclusively assign them for drinking. (13) To carry out, as far as possible, the suggestions offered undor the head of conservancy in the last Inspection Report. (2) To provide latrue accommodation near the railway station, the kutchery and the school, and to adopt the use of th

Action taken on the suggestions.—It has been resolved to carry out the suggestions as far as funds permit.

Barisal Town—Inspected in November. 1886.—This town had considerably improved since last visit, chiefly in the direction of opening out the drains, connecting them with tanks, and thereby allowing the tidal water free passage backwards and forwards, so that there was no stagnation or decomposition in much of the water throughout various parts. It appeared

to have been suffering much less than neighbouring places in the district from a severe autumnal fever, and moreover the fever here was unattended with mortality, which was heavy in the district. This might have arisen from the action taken by the Commissioners with regard to drains and tanks. I had much pleasure in commending what had been done and the interest shown in improving the health status of the place. Barisal, however, still teemed with grave insanitary conditions which must be attended to before the town could be

placed on a proper sanitary footing.

The suggestions were—(1) To devote annually a much larger proportion than only 1.47 per cent. of the income to rectify the sanitary defects which yet exist and generally carry out permanent sanitary works. (2) To fully utilise, after their extension to the town, the sections of Part VI of the Municipal Act which bear on building regulations. (3) To clear all jungle from the sides of the public roads and drains, and to require house holders to keep their holdings clear, explaining to them that cultivation of the ground as gardens is the best method of doing so. (4) To have the large excavation, on the bank of which stands the Kotwali latrine, indirectly connected with the river. (5) To consider the advisability of annually setting apart a small portion of the revenue for filling in one or two of the holders with mud and sand from the river churs during the dry weather. (6) To acquire a few of the excavations conveniently situated, and convert them into tanks for drinking purposes, and to utilise the earth which would then become available for filling in some of the smaller holes Also to induce the rich owners of some of these to treat them similarly. prosecute persons found casting rubbish and branches into public drains. (8) To have the pucca drain, which is to be made on each side of the chief bazar street, shallow and saucer-shaped, and allow no encroachments over or beyond it. (9) To gradually extend this sort of pucca drain throughout the town in the crowded localities, parts being done every year. (10) Wherever pucca drains are provided, to see that all house drains have puces connections with them. (11) To reserve for drinking some more tanks conveniently situated and containing good water (12) To have the privies situated on the banks of the khalls or of tanks communicating with them removed, wherever possible, to a safe distance, and the "gumlah system" much more closely supervised than at present. (13) To require the owners of filthy tanks either to maintain them in proper order or to have them filled up. (14) To sufficiently strengthen the conservancy establishment. (15) To provide barrel-carts for the removal of fluid refuse from houses to the trenching ground for disposal, until such time as it can be discharged into pucca shallow public drains. (16) To properly dispose of the urine and litter from the cow and other cattle-sheds, and not to allow them to accumulate and rot within house premises and find their way during the rains into tanks and khalls. (17) To have the latrines for females quite apart from those for males, and attended to by methranis only. (18) To keep the public latrines scrupulously clean and sweet. (19) To strictly work Part IX of the Municipal Act, and at once put an end to the filthy condition of the privies. (20) To persevere with the removal of the privies from the banks of the tanks and khalls. (21) To scriously consider the expediency of collecting all night-soil on board one or two boats, and its disconsider the expediency of collecting all night-soil on board one or two boats, and its disconsider the expediency of collecting all night-soil on board one or two boats, and its disconsider the conditions. consider the expediency of collecting all night-soil on board one or two boats, and its discharge into the middle of the river at ebb tide. (22) To require the owners of both the markets to attend to the defects pointed out, and to keep these places quite clean. Also to have markets to attend to the defects pointed out, and to keep these places quite clean. Also to have the daily market gradually provided with pueca shallow saucer drains. (23) Not to lose sight of my recommendations made under the head of slaughter-houses in the last Inspection Report. (24) To cause the *chapper* in the Mahomedan graves to be placed at least four feet under ground, and to require the chowkidar in charge of the graveyard to see that this is always observed. (25) After the introduction of the Compulsory Vaccination Act, to more actively carry on vaccination than at present. (26) To fully utilise the Compulsory Registration Act, specially its penal clauses. (27) To require the registrar to go round the various wards alternately for a few hours every day, and detect all omissions of the requirements of the law and bring up the offenders for punishment. (28) To require the municipal servants, such as overseers and tax-collectors, to report the events as a check on municipal servants, such as overseers and tax-collectors, to report the events as a check on voluntary registration. (29) To introduce the hath-chitti system which has been adopted in several towns in Bengal, the receipts granted for deaths reported being required to be made over to the persons who are in charge of the burial and burning-grounds.

Howrah Town-Inspected in December 1886.—The Chairman, Dr. Pilcher, and the municipal overseer generally accompanied me during my inspections. I was much disappointed, returning after two years, to find that few permanent sanitary works—works which the town is greatly in need of—had been carried out since last visit. Grave defects requiring urgent attention existed under almost every branch of sanitation. The bustis were generally in a very insanitary state, and constituted a standing menace to public health. The drainage was defective, and the most important and pressing question of water-supply seemed to have received no attention. In fact much must yet be done to put the town on a sound sanitary footing.

The suggestions were—(1) To devote your after your a fair and equitable share of the income to rectify the existing defects and place this important town on a thoroughly sound sanitary footing. (2) To fully utilise the sections of Part VI of the Municipal Act which relate to building regulations, and prevent the crowding together of huts in the bustis without proper provision for drainage or ventilation or facilities for scavengering. (8) To coase to grant licenses for brick-fields within the limits of the Municipality. (4) To have the bustis efficiently surface-drained, and their conservancy properly attended to, and to provide them with a good supply of wholesome water, as well as with sufficient latrine accommodation.

Also to construct good roads through them. (5) To consider the desirability of improving the land west of the busti to the north of the Seebpore Jute Mill (Apear's) by converting one of the large excavations into a deep tank, and using the earth obtained to filling in other shallower ones. (6) After roads are run through the improved bustis, to require the and-lords to keep them in such repair as will admit of seavenger carts using them. (7) To entertain a regular staff of drain-coolies told off to each division of the town, and again so sub-divided that the headmen of each gang may be held responsible if any drains are in (8) To reconsider the whole question of the drainage of Howrah, stormwater of the lands near the river bank only being discharged into the river, while the stormwater and sewage of the greater part to be carried to the westwards and discharged by the natural drainage channels of the country, and to prepare some scheme drawn on these lines.

(9) Pending the provision of an improved system of drainage, to take an engineer's opinion as to the possibility of carrying the sewage complained of by the Health Officer of the Port across the Grand Trunk road to the westwards. (10) To make provision for gradually converting the kutcha side-drains into pucca shallow saucer-shaped ones. (11) To consider the desirability of soon maturing the scheme for supplying this important town with filtered water. (12) To require the owners of dirty ponds to fill them up with rubbish when useful and harmless stuff of the sort is available without cost at the salt golahs and other places of business. (13) To include drains among surface cleansing, and thus keep them permanently clean. (14) To provide public latrines at convenient places, particularly in the southern parts of the town, and to adopt generally the iron ones of Hornbury's pattern to be got from Messrs. Burn and Company. Also to put up a few of the latter of five or six seats, scattered here and there, throughout the bustis, specially for the use of women and children. have the latrines intended for the use of females attended to by methranis only. (16) To put up more corrugated iron urinals along the principal thoroughfares and in the crowded put up more corrugated iron urinals along the principal thoroughfares and in the crowded localities. (17) To see that the iron casks in which the washings and the urine from the latrines are removed are not leaky. Also to throw over them some decodorant or antiseptic powder while they are taken to the trenching ground. (18) To carry on the trenching system properly, the trenches being dug only one foot deep and one foot wide, and only six inches of night soil poured into them, and the remainder filled with earth. (19) To have the conservancy of all the private markets scrupulously attended to. (20) To consider the advisability of constructing a proper municipal market. (21) To have the shops for the retail sale of European medicinal drugs registered, and to see that the compounders and disponsers are qualified men holding certificates of competency. (22) To immediately close the lurial-ground which is situated in the southern portion of the town, and prohibit further disponsers are qualified men holding certificates of competency. (22) To immediately close the burial-ground which is situated in the southern portion of the town, and prohibit further interments in it. interments in it, and plant the ground with rapidly-growing trees. (23) To provide a graveyard as soon as possible in the place of the one to be closed. (24) To have the graves dug sufficiently deep, so that the chapper which is usually placed over the Mahomedan dead may be at least four feet, and not two or two and a half feet as at present, under the ground. (25) To consider the desirability of introducing the Contagious Diseases Act into the town. (26) To require the tax-collectors and the overseers to discharge satisfactorily their duty in connection with the reporting of births and deaths. (27) To fully utilise the provisions of the Compulsory Registration Act, and specially appoint a man to go round the various wards alternately and try to detect all omissions of the requirements of the law. (28) To require the receipts granted for deaths reported to be produced before cremation or burial either to the constable of the heat within which the burning or the burial-ground where the body is taken for disposal is situated, or the persons in charge of the same grounds. (29) To induce the midwives to give information of all births at which they attend.

Krishnagore Town—Inspected in December 1886.—I went round the town in company with the Chairman, who seemed anxious to do what he could, and was taking much interest in and trouble concerning municipal affairs. I also communicated with some of the Municipal Commissioners during my inspection. Some improvements were seen to have been effected since last visit, the chief being the introduction of river-water into almost all the important tanks; the re-excavation of the municipal tank; the sinking of three new wells; and the strengthening of the conservancy establishment. Want of funds, however, had seriously embarrassed the Commissioners and prevented them from doing much in this direction. They had yet to contend with many serious sanitary defects, notably under the heads of drainage and water-supply, which must continue to tell heavily upon the health of the people.

The suggestions were—(1) To practise as much economy as possible, so that something might be available every year for remedying the serious defects that still exist under the various branches of sanitation, and carrying out permanent sanitary improvements. (2) To consider the desirability of asking Government to appoint a third-grade Assistant Surgeon to have charge of the charitable dispensary in the place of the present second-grade man, and thus effecting a considerable saving in the pay of that officer. (2) To ask some of the liberal minded zemindars of the place to advance to the Municipality at a small rate of interest-the amount required for meeting some of the pressing wants of the town. (4) To fully utilise the sections of Part VI of the Municipal Act which refer to building regulations. (5) Not to allow rubbish, &c., to be east into the pucca readside drains; and further, to have these drains regularly swept with brushes made for the purpose. (6) To insist upon house-holders keeping their holdings free from jungle. Also to have the bamboo clumps, which are found in all parts of the town and which greatly impede ventilation, thinned at places. (7) To press the zemindars to more activity, and cause them to fill up filthy pits

and hollows. (8) To have the pits in Goari as far as possible connected with one another by a channel admitting river water near the ghât, which would pass through and re-enter the river down near the civil station. (9) To induce the rich owners of the pits to convert some of them into serviceable tanks for drinking purposes, utilising the earth which would then become available for filling in smaller holes around. Also to see if at least one of the holes cannot be treated in this manner by the Municipality every year. (10) To take the opinion of a qualified engineer on the subject of improving the drainage of the southern and eastern portions of the town by opening out an old moat and making a connection with the Anjona, and if he decides in favor of the project, then to carry it out. (11) To have the town properly surveyed and levels ascertained according to which drains can be made, and to undertake a complete scheme of drainage, and either accomplish it gradually, parts being done every year, or raise a loan for quickly carrying out this important work. (12) To provide pucca shallow saucer shaped drains in the crowded localities and along the principal thoroughfares. (13) In future, instead of constructing reservoirs in connection with the public wells for collecting the spill water, to construct a pueca shallow drain communicating with another around the rim of the masonry platform, to carry off the spill water to the nearest drain or to a safe distance from the well. (14) To adequately strengthen the conservancy establishment and increase the number of carts and draught cattle. Also to strictly vancy establishment and increase the number of carts and graught cattle. Also to strictly supervise the establishment, the work of each man being apportioned to him, and that work taken in full. (15) To have the lanes and by-paths swept at least twice a week, if possible, and the sweepings removed from them. (16) To include drains among surface cleansing and thus keep them permanently clean. (17) To require all the inhabitants to bring out at a fixed hour all house-rubbish and deposit it on the road-side for removal by the conservance. Also to have the existing accumulations of rubbish and other offensive matter around and at the backs of houses removed at the cost of the offenders. (18) To cause all cesspools in which house refuse is collected in the thinly inhabited quarters of the town to be filled up as soon as possible. (19) Not to allow cow and cattle ordure to be stored up within the compounds of houses, but to have it either converted into cakes for fuel or deposited in the fields till required as manure. (20) To construct more public latrines at convenient places, and instead of the ordinary structures to adopt Hornbury's patent iron latrines. (21) To actively carry out the suppression of the well-privies and require their latrines. (21) To actively carry out the suppression of the well-privies and require their owners to provide for themselves properly-constructed surface privies with receptacles which could be got at and cleaned easily. (22) With the gradual increase in public latrine accommodation, to adopt stringent measures to put down promiscuous defocation. Also to require the police, under section 365 of the Municipal Act, to perform this part of their duty more satisfactorily than heretofore. (23) To extend to the whole town Part IX of the Municipal Act, which is now in force in only two of the wards. (24) To encourage by all means the cultivation of the trenching grounds. (25) To remedy the defects pointed out in the Goary market, and provide a proper cleanly place with pucca floors and drains. (26) To call upon the Nuddea estate to entirely remodel the market belonging to it in the old town, and to preset a corrugated iron one with paved floors and drains, and to provide a urinal in the vicierect a corrugated iron one with paved floors and drains, and to provide a urinal in the vici-(27) To close the burial-ground at Radhanagore, and prohibit further interments in nity. (27) To close the buriar-ground at Radianagore, and prompt further interments in it, and to have this ground, as well as the one that has already been abandoned, planted with rapidly-growing trees. (28) To establish at the outskirt of the town a new ground in place of the one to be closed. (29) To see that the graves in the public cemeteries are dug in regular rows with fixed intervals between each grave and each row of graves, and to require the man in charge of the municipal grounds to look to this. (30) To insist upon complete cremation in every case belonging to the town, and to make a representation to the complete cremation in every case belonging to the town, and to make a representation to the Magistrate with the view of effectually putting a stop to the reprehensible practice of throwing uncremated or partially cremated bodies in the river (31) To have the Hindu pauper dead burned at the cost of the Municipality. (32) To have the clothes, pillows, &c., of the deceased destroyed by fire along with the body. (33) To fully utilise the provisions of the Compulsory Vaccination Act, particularly the penal ones. (34) If possible, to specially appoint a man to detect and report for punishment all evasions by the people of the requirement of the Compulsory Registration Act. (35) To fully applied the manual clauses of the ments of the Compulsory Registration Act. (35) To fully avail of the penal clauses of the above-named law. (36) To introduce the hath-chitti system which has been adopted in several other municipalities. (37) To induce the midwives to give information of all births at which they attend.

Serampore Town—Inspected in December 1886.—Accompanied by Dr. Barker and the overseer, I inspected this town from one end at Seoraphuli to Konnaghur at the other, a distance of several miles. The Vice-Chairman had notice of my coming, but did not appear. The general condition of the place was much as formerly, and no drainage or other works had been constructed since my last visit for its improvement. Indeed, there appeared, except the metalling of roads, to have been no original sanitary works in progress or under consideration. The drainage was still in the defective condition in which it had always been, and the amount of jungle was still very great, and in places the undergrowth of low jungle was very dense, completely excluding all air and light. The old tanks, pits, and holes overhung by trees, bamboos, and jungle were exactly as when last seen, and their condition had by no means improved. The water-supply was unchanged, and still in the same defective state as before. The arrangements under the head of disposal of the dead, as far as interments were concerned, were very unsatisfactory, and in several respects objectionable, while those relating to markets were as bad as possible. In short, most of the elements that predispose to disease abounded in this Municipality to the detriment of public health.

The suggestions were—(1) To annually devote a much larger proportion than only 5.62 per cent. of the income towards rectifying the grave sanitary defects that still exist and placing all parts of the town on a proper sanitary footing. (2) To require the house-holders to keep their holdings free from noxious vegetation, &c., and to have the bamboo clumps, which greatly impede ventilation, thinned at places. (3) To observe some method in employing street-sweepings, &c., for filling up pits and excavations; to have those intended to be got rid of first dewatered in order that the operation may be carried on as inoffensively as possible, and to take up only so many of them at a time as can be dealt with within a short period. (4) To consider the advisability of acquiring some of the larger excavations and converting them into good drinking tanks, utilising the earth which would then become available in filling in the smaller holes around. (5) To have the chain of filthy pits along the west of the railway line between the Seoraphuli and Serampore stations connected, as far as practicable, with one whother, and with the tidal khall which runs through the town. (6) To consider the expediency of annually setting apart a small portion of the municipal revenue for filling in some of the filthy hollows and ditches with earth. (7) Not to permit any interference with the drainage channels already in existence, or the creation of others to the detriment of the general drainage of the locality. (8) To construct gradually pucca shallow saucer-shaped drains along the principal streets and in the crowded localities, making, however, considerable progress every year. (9) Wherever pucca drains are provided, to see that all house drains have pucca connections with them. (10) To favourably reconsider the question of joining in the preparation of the scheme for the supply of filtered water to the riparian terms on the west bank of the Hughli, and to soon take the project in hard. towns on the west bank of the Hughli, and to soon take the project in hand. considerably increase the conservancy establishment and have it strictly supervised. (12) To have the lanes and by-paths swept at least twice a week and the sweepings properly removed. (13) To provide a certain number of wheel-barrows for the proper conservancy of the narrow lanes. (14) To include the drains within surface cleansing, and thus keep them permanently clean. (15) To provide barrel-carts for the removal of fluid house-refuse from the crowded localities to the trenching ground for disposal, until such time as it can be discharged into pucca shallow public drains. (16) To construct more public latrines at convenient places, and reserve some of them for the exclusive use of females. Also in place of the miserable mat structures to adopt the use of Hornbury's patent corrugated iron latrines sold by Messrs. Burn and Company of Calcutta. (17) To prevent all drainage of urine latrines sold by Messrs. Burn and Company of Calcutta. (17) To prevent all drainage of urine and washings from the latrines on the river bank, and have these collected in pucca reservoirs and removed in barrel-carts to the trenching grounds for disposal. (18) With the gradual increase in public latrine accommodation, to make persevering endeavours to put down promiscuous defection. (19) To early extend Part IX of the Municipal Act to the Mahesh, Rishra, and Konnaghar wards, where the condition of the private privies is far from being satisfactory. (20) To procure plots of land convenient to the night-soil depôts for the purpose of trenching, and have them changed as often as possible, being given back to the cultivators after being manured. (21) To keep the municipal market scrupulously clean and in good repair. (22) To have the new market under construction in the Chattra ward carefully laid out, so that houses shall stand in rows with broad spaces between for the placing of grain and merchandise. Also to see that all divisions of the market give placing of grain and merchandise. Also to see that all divisions of the market give access to conservancy carts. (23) To supply latrines and urinals at the owner's expense, the former of corrugated iron of Hornbury's or other similar pattern. (24) To properly attend to the conservancy of all the markets, and to call upon the owners to contribute attend to the conservancy of all the markets, and to call upon the owners to contribute for this. (25) To at once put a per limit intramural burial, and generally refuse permission to bury within house enclosures. (26) to prohibit interments in such of the other private graveyards as are near the dwellings of the people, and to establish in their stead one or two municipal grounds at the outskirt of the town. (27) To see that burials in the grounds to be provided are in lines with fixed spaces between each grave and each row of graves, and to have the graves dug sufficiently deep so that the chapper which is usually placed over a Mahomedan corpse may be at least four feet under ground. (28) To fully utilise the Compulsory Vaccination Act, specially its penal provisions. (29) To require the tax-collectors and the overseers to report births and deaths as a check on voluntary registration. collectors and the overseers to report births and deaths as a check on voluntary registration, and to prevail upon the midwives to give information of all births which they attend.

Midnapore Town—Inspected in December 1886.—The Civil Surgeon and the municipal overseer were present with me during some of the inspections. It appeared that the general cleanliness of the town had improved since last visit; that rubbish was being more perfectly removed, and that the latrines were more numerous. The drains were generally cleaner and the central khall of the town was in action, the water running freely in its upper part, and also, though more slowly, near the outlet. Much, however, yet remained to be done to place the town on a satisfactory sanitary footing. The drainage and the conservancy arrangements, though considerably improved, were still very defective, and the water-supply question demanded the most careful consideration of the Commissioners, the present supply being insufficient and generally of an inferior quality. Filthy pits and hollows were very numerous and had to be gradually dealt with.

question demanded the most careful consideration of the Commissioners, the present supply being insufficient and generally of an inferior quality. Filthy pits and hollows were very numerous and had to be gradually dealt with.

The suggestions were—(1) To require the methers to alean at least 25 or 30 privies or more, as in other municipalities, and to carefully inquire into the work actually performed by them, and try to effect as much saving as possible in the cost of maintaining the establishment. (2) To annually devote a larger proportion than only 1.37 per cent. of the income to rectify the existing defects and carry out permanent sanitary improvements. (3) To consider the expediency of slightly raising the taxes. (4) To see that the pucca side-

drains, particularly those in Burra Bazar, are kept quite free from silt and Fubbiel. (5) To consider the advantages of using half Ranigunge drain pipes for roadside drains before shops and in other crowded streets, also as junctions between house and street drains.

(6) To persevere with the filling up of all filthy pits and excavations, and to fully utilise street-sweepings for the purpose when the pits are at a distance. street-sweepings for the purpose when the pits are at a distance from the homesteads. (7) To consider the advisability of annually setting apart a small portion of the income for filling in two or three of the hollows that are situated very near the dwellings of the people with mud and sand from the river bed during the dry season. (8) To undertake a complete scheme of drainage, and gradually carry it out under professional supervision, parts being taken up every year. Also to have the drains, as far as practicable, diverted from emptying into tanks. (9) To provide pucca, shallow saucer-shaped drains in the crowded localities and along the principal streets. (10) Wherever pucca drains are previded, to see that all house drains have pucca connections with them. (11) To set apart certain tanks for drinking purposes, and properly protect them from all sorts of pollution not temporarily, but all the year round. (12) To induce the rich owners of some of the tanks to have them redug, thoroughly protected and reserved for drinking purposes. (13) To fill up such of the tanks as are useless or cannot be maintained in proper order. (14) To construct a pucca shallow drain around the rim of the well platform, and connect it with another pucca drain, so that the spill water may be carried to the nearest public drain or to a safe distance from that the spill water may be carried to the hearest public drain or to a safe distance from the well. (15) To provide all the municipal wells with buckets and chains, and prohibit the promiseuous dipping of vessels into them. (16) To sink one or two pucca wells every year at convenient places. (17) To do the best to promote and carry out the scheme for the water-supply of the town prepared by Mr. P. B. Roberts, Divisional Superintendent of Road Cess, and not to lose the grand opportunity of turning the Jubilee of Her Majesty into account by obtaining the consent of the whole community to divert, towards providing a filtered water-supply for the town the money which is intended to be spent on founding a filtered water-supply for the town, the money which is intended to be spent on founding some memorial of a permanent nature, either in the shape of a public hall, park or scholarship, to commemorate the Jubilee year. (18) To give early effect to the suggestions offered under the head of conservancy in the last Inspection Report. (19) To strictly supervise the conservancy establishment. (20) Not to allow cow-dung, &c., to fester within the compounds of houses, but to have it either converted into cakes for fuel, or daily deposited on the roadside for removal by the conservancy carts, or removed to the fields as manure. (21) To remove the pig-keepers to the outskirts of the town or beyond, if possible, if this can legally be done. (22) To provide more public latrines for females, and in place of the ordinary structures, to put up on pucca floors Hornbury's patont iron latrines sold by Messrs. Burn and Company of Calcutta. (23) To see that each of the kutcheries is provided with a public latrine of the type mentioned above. (24) To provide all the public latrines with proper drainage arrangements for spill-washings and urine and a removable collecting vessel. (25) To, particularly enquire whether all night-soil is removed to the trenching grounds or not, and make sure that the establishment paid for is really employed. (26) Not to bury night-soil in pits measuring 10 feet × 5 feet × 5 feet, but carry on the trenching system in the manner recommended in the last report. feet, but earry on the trenching system in the manner recommended in the last report. (27) To consider the desirability of providing a public market. (28) To have the shops for the retail sale of European medicinal drugs registered, and to see that the compounders or dispensors are qualified men holding certificates of competency. (29) To erect the new slaughter-house pucca throughout, and provide it with proper drains, water-supply, and other conveniences. (30) To allow none but healthy animals to be killed for food consumption, and prohibit the killing of cattle at any other place (31) To have the burial-grounds marked out in regular lines so as to economise space, and to keep them quite free from jungle. (32) To ask the Mahomedan community to keep the Mirzagunge burial-ground free from jungle, and plant a few flowering trees on it. (33) To take steps to remove the Tantigurriah burial-ground to the reverse or southern slope towards the river. (34) To have the cooly lines properly laid out with the huts standing in regular lines, to remove the Tantigurriah burial-ground to the reverse or southern slope towards the river. (34) To have the cooly lines properly laid out with the huts standing in regular lines, and having free and sufficient passage in front of or between each line. (35) To improve the drainage and conservancy arrangements of these places, and see that they have sufficient latrine accommodation and a good supply of wholesome water. (36) To fully utilise the provisions of the Compulsory Vaccination Act. (37) To make full use of the penal clauses of the Compulsory Registration Act. (38) To require the registrar specially appointed for the purpose to go round the various wards alternately, and try to detect all evasions by the people of the requirements of the above-named law. (39) To require the tax-collectors, &c., to discharge their duty in connection with the reporting of all births and deaths more satisfactorily. (40) To adopt the hath-chitti system which is in force in other municipalities. (41) To induce the midwives to give information of all births at which they attend. which they attend.

which they attend.

Action taken on the suggestions:—It was resolved—(1) To reduce the number of methers from 166 to 149, and require each of them to clean between 20 and 25 privies.• (2) To have the drains in Burra Bazar laid with half Ranigunge pipes. (3) To fill up with mud and sand the baoli near the Aligunge outpost. (4) To allot Rs. 1,000 as provided in the budget of a complete scheme of drainage for the town. (5) To construct pucca shallow drains around the rim of the platforms round the public wells, and connect them with the nearest drains. (6) To reserve the Library tank for drinking. (7) To complete the well already commenced to be dug at Habibpore. (8) To direct the overseer and the assistant overseer to inspect the trenching grounds at least twice every week, and report as to whether or not

all the night-soil of the town is taken by the methers to these places. (9) To request the Ward Commissioners to supervise the conservancy establishment. (10) To issue notices to owners of cattle, strictly prohibiting them to deposit cow-dung, &c., within the compounds of their houses. (11) To strictly enforce the provisions of section 265 of the Municipal Act, and fix Kocikota for keeping of pigs. (12) To introduce Hornbury's patent iron latrines within the Municipality. (13) To adopt shallow trenching in so far as the extent of the trenching ground would allow. (14) To have the shops for the sale of European drugs registered under section 252, and to ask the Magistrate to move the Local Government to issue a notification in the Calcutta Gazette for the extension to this Municipality of the second clause of the said section. (15) To send a copy of the suggestions regarding the Mirza Bazar burial-ground to the Secretary, Mahomedan Association, with the request to carry out the suggestions. (16) To require the owners of cooly depôts to take out licenses under section 261 of the Municipal Act. (17) To remove the Tantigurriah burial-ground to the southern slope towards the river. (18) To require the midwives to give information of the births which they attend, and the wood-contractor at the burning ghâts to keep a register of all dead bodies brought for cremation.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sanitary Commissioner for Bengal.

The 10th May 1887.

APPENDIX No. VI.

STATEMENT SHOWING THE SANITARY CONDITION OF THE VILLAGES IN EACH REGISTERING CIRCLE IN BENGAL, AND THE MORTALITY FROM SMALL-POX, FEVER, CHOLERA AND BOWEL-COMPLAINTS,

DURING THE YEAR 1886.

Statement showing the Sunitary condition of the villages in each Registering Circle in Bengal and the Ratios of Deaths from Small-pox, Fever, Cholera and Boyeel-complaints therein, during the year 1886.

n	į	498419bc== been		1	1 5 1 5 6
DER THE HEADS OF-	Domestic clesusing.	The conservancy arrangements are on the whole astisfactory. Surface cleaning is well attended to, but the hype-lines are not swept often enough. There is an excellent are of of public latrines—10 in number—but the scheme has not been extended to the whole town. There are no public latrines in the collites where the public once are, are under very satisfactory numicipal management. This system also calls for extension. Fromiscuous defocation is still specially trenched, and portions of the trenching ground are calitivated with good results. Plund are many tanks or water holes and pile about the town which form fifthy cess-pools. The supervising scialulishment requires to be strengthied and better officered. The arrangements connected with disposal of the deed, and markets and slaughter-bouses are opput	The pathways between the houses abound in super- fluous vecetation and filth. The drains are in a filthy condition. The villages, particularly those inhabited by Mailtonedian, are surrounded with jungle the growth vf which is encouraged in order to hide the femiles more effectually from public view. See also pages 124 to 128 get this keport.	Surface cleanaing is attended to There are no public latraces 1 on night-soil and fluid recture from the private private sur buried in waste und away from habitations. Informent within compounds of housest is occasionally allowed. See also page 128 of this Report.	The spaces between the henses abound in superfluous regression. The paths and drains are in a fifth condition. Some houses are surrounded by junate which is reserted to for defectation. Conservancy nil. 866 also pages 101 to 104 and 124 to 126.
NANITARY ESITMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HEADS OF-	Water-supply.	The town possesses an admirable system of waterworks, but it is confined to its northern division and has not yet been to the south-rn, where the water-supply is taken from very fight yanks, and the highly polluted Eden canal and Banks river. Even in the southern division the supply is inadquiste, and house connections with the water-works are mainficient. The tanks in this division are now used for bathing, but they are very fifthy. There are also in the town one protected public well and numerous private ones, in a more or less bad condition, which are used for all purposes.	Is taken principally from tanks which are need promismously and defiled more or less in other ways; but the tanks which are situated outside thinase seperally contain possible water. Where there are rivers their water is used, but low castes thou their dead into them. See also pages 124 to 126 of this Report.	Only the northern Is taken principally from the river and from a set supplied with 1-ree municipal tank Some tanks are, however, page 123 of this to be accavated. See also page 123 of this Ketport.	See the ls testen from tanks which are used promiseucusly and are otherwise more or less politated. Those of the tanks which are situated outside of the valuese contain postable water energist. Where there are rivers their water is used. On the whole the switer-supply is monificient.
BANITARY B	Drainage.	Drainsge is defective. The flow of water and sub-coll drains originally designed to discharge into the free now drain and carks and reallows, which have no outlets. The main drains are deep and defective in levels. The smaller drain of no again to the being dissipation, and consequently sinell unpleasafuly in the dry weather. The house drains are not coinceted with the road-side drains.	Sec pages 101 to 104 and 124 to 125 of this Report	The drainage is defective. Only the northern light of the tewn has been supplied with purce drains. See also page 128 of this Report.	No report is at present available. See the general account on pages 101 to 104 and 124 to 126.
ROM-	Воwеl-сога- ріліпія.	स •	జ	86.2	8.
RATIO OF DEATHS PER OF OF PIPELATION FROM	Словив.	ş	8	5.63 2.73	Ŗ
POPUL.	FOVOR.	16.75	17.12	17.98	05.71
RATIC	Small-pox.	85.			į
	Роридьсков,	34,080	27,330	10,901	81,583
	Name of Circle.	Burdwan—Town	Burlwan - Bural	Cuina - Toers	Cylns - Rurol
	District.	Burdwan	Burdwan	Burdwan	Burdugn

• For the general Santary condition of the Villages in this District, see pages 101 to 104 of this Report.

App	. VI.]	<i>.</i> .			xciv		•		
SB THE BEIDS OF-	Domestic cleansing.	Conservancy nil. Fields and waste lands are resorted to for deficiention. Rethos and cowding are collected in pits and excavations till required for manure. See also pages 101 to 104 and 124 to 126 of this Report.		The conservancy arrangements are flot well rearried out. The sweenings, &c., are removed by contract, but very incompletely. Heaps of rubbish are to be found othered many house, on the banks of tank, &c. The cartle-sheds are filthy, and the dung, &c., are or card in the premises and only removed on compulsion.	The houses are generally neat, clean and dry, but in many vallages are il-ventilated and crowded. No conservency. Pefrecation is carried on in jungles and waste lands, and refuse and cow-dung are collected on footpaths. See also pages 101 to 104 and 124 to 126 of this Report.		The spaces between the house abound in superfluents vereintion. The pasts and drains are in a filthy condition, some houses are sur-ainded with jourse which is recorted to for deforation. Conservancy nil. See also pages 101 to 104 and 134 to 139.	In some villages the houses are crowded together, illustrials and surrounded by trees or banboe clumps. No conservancy. Defocestion is carried in juncles and waste lands, and in some places on roads and footneths and bonks of fasts, pigs serving as coveninger, but contributing to the missues themselves. Organization and interment are carried on in some places "ear fants, are past of the solution and the large of vicines and manure are to be met with. Cattle are kept inside 4% elling houses. See also pages 101 to 104 and 124 to 126 of this Report.	No conservancy. Detectation takes place in ungles and waste lands. Many villages are full of jungic and trees. The rest the same as in Culna.
TIMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HELDS OF-	Water-supply.	Water is taken from tanks, and depressions in which rain water collects. Many of the tanks are large and good. See also pages 101 to 104 and 1:4 to 135 of this Report.	Sec the general account on pages 101 to 104 and 124 to 126,	Is taken from tanks and wells, but is not adequate. The sincle municipal tank and five other unprotected, private ones have been reserved for drinking purposes. Four of the wells have also been protected. On the whole the water-supply is impure.	Is taken from the river Danuda and from tanks. The former and most of the latter afford a good supply. See also pages 101 to 104 and 124 to 125 of this Report.	See the general account on pages 101 to 104 and 124 to 126,	Is taken from tanks which are used promiseuously said are otherwise more of less polluted. Those of the tanks which are situated untistile of the villages ountain potable water generally. Where there are rivers their water is used, On the whole the water-supply is insufficient,	Is taken from tanks, ponds and exervations. Some of the first are large, and very good, the ponds are centrally choked up, but their water is used only for cultuary purposes. In general tanks situated outside of villeages contain food water, but being at a distance are not resorted to. The tanks in the villages are highly polluted, a great source of pullution being the practice of women entering the water to bathe immediately after anointing themselves with oil and turmere. See also pages 101 to 104 and 124 to 126 of this Report.	Is taken from tanks, some of which are large and good. The rest the same as in Cuina.
SARITARY ESTIMATE	Drainage.	The villages are situated on elevated ground and are dry. See also pages 101 to 104 and 124 to 126 of this Report.	No particulars are yet available. Sec the genera	The natural drainage is good, the town being stuated on a sloped laterite soil. But the rans are ill constructed and badly levelled, 'd as a rule empty into tanks.	rainage is defective. See also pages 101 to 104 and 124 to 126 of this Report,	No particulars are available at present. See the	No particulars are at present available. See the general account on pages 161 to 135, 124 to 125.	Drainage is defective. See also pages 101 to 104 and 124 to 126 of this Report.	Drainage is defective. Sec also pages 101 to 10s and 12s to 12s.
000,1	Bowel-com- plants.	05.	7.	8	ફુંદ્	ş	्द्ध	60.	5 9.
HS PER	Сћојега.	8	;	1.18	01.	1.35	.19	8	\$8
OF POPULATION FROM-	Ferer.	13-97	16:01	12:34	12.48	14-95	14.40	15.75	18.21
BATIO OF PC	Small-pox.	5	·		:	:	!		•
	Population,	88.847	75,171	10,987	133,646	54,991	97,190	102,748	71,709
	Name of Circle.	Assensole or Nyamut. p.re-Rural.	Sahibgunge—Rural	Ranigunge—Town	Ranigunge—Rural	Khandoghose-Rural	Royins Burel	Gangoor or Satgachia —Karol.	Selimabad—Ruraf
	District.	Burdwan	Eurdwan	Burdwan	Bardwan	Burdwan	Burdwan 'r	Burdwan	Bardwan

Burdean	Ausgram-Rural	112,72		19.81	9.	\$2	No particulars are yet available. See the genera	See the general account on pages 101 to 104 and 124 and 125.	c
Burdwan	Ketugram—Rural	81,81		16'08	2.31	£1.	See pages 101 to 104 and 124 to 126 of this As in Gaugeor Report.	As in Gangoor	The houses are ill-ventilated, but kept dry and clean. Conservancy absent. Treatment of sweepings, cowdung, &c., and deferention as in Gangoot. Nes also pages 10t to 104 and 126 to 126.
Burdwan	Mongulkote—Baral	78,648		15.88	168	ar.	Ree pages 101 to 104 and 124 to 126 of this Report.	See pages 101 to 104 and 124 to 126 of this Report.	See pares 101 to 104 and 124 to 126 of this Report.
Burdwan	Kutwa-skraf	85,948	i .	15.92	20.8	8	See pages 101 to 104 and 124 to 126 of this Report.	Is taken from tanks and ponds. The remarks re- garding the pollution of the water-supply by women and the state of the tanks on the out- airts against Gangcor are also applicable here. See also pages 101 to 10s and 12s to 12s of this Befort.	Many of the bouses are devoid of ventilation, but they are kept clean and dry. Conservancy all. The remarks resarding treatment of sweepings, cow-dung, &c., and defection against Gangoor are also applicable here. See also pages lut to 104 and 124 to 126 of this Report.
Burdwan	Kaksa-Rural	88,989		18.74	1.85	8	No particulars are available at present. See gen	See general account on pages 101 to 104 and 124 to 128.	
Burawan	Montessur-Rural	63,063		13.56	11.61	7	Some of the villages are attracted on elevated ground. See also pages 101 to 10s and 12s to 12s of this Report. c	Is taken from tanks and poinds. Some of the tanks contain good water, particularly those in the outsignization that the being convenient are not generally resorted to. The other tanks are much polluted—enerially by women who atomit themselves with oil and turner; in just before getting into the water to bathe. The points are used for culinary purposes. See also pages 101 to 104 and 124 to 126 of this Report.	The houses are ill ventilated, but are kept clean and dry. Some rillages are clean, but in some sweepings, cowding and other review beaps are to one even. Defection is carried on, on fields, but in some places the roads and footnaths, the nearest jungle, or bunks of tanks are resorted to for the purpose, the spigs being the exarengers, while they contribute to the missance themselves. See also pages 101 to 104 and 124 to 126 of this Report.
Burdwan	Bood-Bood-Rural	870,97		15.82	; 2	23	No particulars are at present available. See the general account on pages 101 to 101 and 124 to 235.	Is taken from tanks which are used promiscuously and are otherwise more or less solluted. Those of the tanks which are situated outside of the villages contain potable water generally. Where there are rivers their water in used. On the whole the water-supply is insufficient.	The spaces between the houses abound in superfluous vegetation. The paths and drains are in a flishy cendition. Some houses are surrounded with parele which is reserved to for deferention. Conservand nil. See also pages 101 to 104 and 124 to 126.
Burdwan	Perhasthalli or Blu- toria-Rural.	82,070	ē	18.43	\$.	ę,	No particulars are yet available. See general ac	See general account on pages 101 to 104 and 124 to 136.	• .
			ļ.						
* Bankura	Baukura – Town	18,747		98.6	3	18.1	The natural drainage is excellent. The fall is towards the north and south info the rivers. The public draips discharge into the fields and the house drains are generally counceted with them. Encreachments on, and obstructions to drains are not allowed.	Is taken generally from the rivers and is good, as it is filtered through a bed of sand; but during the rains organic matter and retire are washed into the river. There are also numerous tanks, some of which have been reserved for bathing and other purposes.	The conservancy arrangements are on the whole good; but in the outlying villages they are not correlated to, as relues, dung, sweepings, straw, &c., are accumulated in the compounds of, and around the bouse. In the other parts surface cleansing is carefully attended to and the sweepings, &c., taken outside of municipal limits and burnt. There are three public latrines. Some of the pirrate prives are under municipal management. Well-privies have been abolished. The night-soil is frenched in the jail granfam. House reluse—fluid, and solid—is removed outside the cremation are very satisfactory.

. For the general Sanitary condition of the Villages in this District, see pages 101 to 104 of this Report.

lpp.	VI.]			xcvi		ŕ			
THE HEAD OF-	Domestic cleansing.	The vanisary condition of the villaces is bad; accumus tuons of filth are to be met with. The habits of the people are filthy. See also page 150 of this Report.	Surface cleans we is fairly attended to, but the refuse from some louses is not remored. There are no public latrines. The private privies, few in number, are under the unsursement of the Municipality. There are no well-privies. The night-soil is removed and deposited in places fixed for the purpose. In some cases burnals take place in the compounds of houses, See also page 131 of this Report.	The habits of the people are flithy. In some villages the basement of the houses are somewhat raised; in general they are ill-rentilated, their buts and stronoinings are filtry; heps of cowd-dung and refus. Ac. are keps on the road-sides, near tanks and in pits close to houses, nocks and corners; and jungle abounds. See also page 130 of this Report.	See page 131 of this Report.	See page 130 of this Report.	The sanitary condition of the villages is bad. See also page 130 of this Report.	The houses are ill-ventilated. The habits of the people are filthy. Conservancy nil. Filth is accumulated. See also page 130 of this Report.	See page 131 of this Report.
SANITARY ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEAD OF-	Water-supply.	See page 130 of this Report	is taken from tanke which are mouerous and contain good water, but none of them have been set apart excusively for drinking or lathing purposes. See also page 13t of this Report.	Is taken from tanks of which a few only own he is said to contain good water, Generally they reverve aurisee drainage, are full of weeds and vegetation, e.g.'-de up, and used for all purposes. There are, beweier, wome cood large tanks to be niet with, procedurely in village Kunchakol, where there so also mome wells the water of which is said to be good, although they are not protected, and separate tanks for duches, see also page 130 of this Report.	See page 131 of this Report	Is taken from tanks, rivers, and other water-courses. The fanks receive reliase cow-dung, dr., and deliceution is carried on ou their banks. The like impurities enter into the water-courses, and they are, in addition, the receivacles of carcasses. See also page 180 of this Report.	Is taken from tanks and water-courses. The tanks receive refuse own-dune, &c., and their lanks are fouled. The water-courses are smilarly polluted and carcasses are thrown into them, and, when dry, their beds are used for defeatation. See also page 130 of thu Report.	In some places the tanks dry up in hot weather, when the khals are resorted to at great inconvenience, he also page 130 of this Report.	See pare 131 of this Report
SAVITARY EST	Drzinage.	The land is low and marshy. See also page 130 of this Report.	Shandural dramage is grod, as the fown is situated on electric ground. The rain water is disclared pround drains into the fields. House drams and encreachment on and obstructions to public drains are covered after, see also page 1.1 of this Report.	i. ange is imperfect. The country is lowing and marshy, see also page 130 of is Report.	See page 131 of this Report	Drainage is defective. See also page 130 of this Report.	Drainsge is defective and obstructed. The grund is w and marmy. See also page 130 of this Report.	The ground is low-lying and marshy. See also page 130 of this Report.	See page 131 of this Report
THS PER	Брипів. Вожеј-сош-	4	*	, F.	iş.	61.	É	19.	
STRS P	Сподога.	2.	<u>~</u>	ű.		5	ä	<u> 16</u>	
RATIO OF DESTRIBBER 1 000 OF POPULATION FROM	Ferver.	12.(12	8	14:34	9.33	22.	13.62	11.34	Data not available.
KAT	Sinall-pox.	'n	i.		:		F		Data no
	Population.	108,904	85.1	119,305	12,618	67,400	172,607	118,321	
-	Name of Curels	Bankura - Rural	Вівінеприк— Тоичя	Buhenpur Rorûl	Sonamukhi-Town	Sonamukhi – Rural.	Ganenjalghatti – Eural	Onda Bural	Kotalpore-Town
	District.	Ванкита	€-nkura	Bankura	Bankura	Bankurs	Benkurs	Bankura	Bankurs

				CALIT	•	
In some places, particularly in village Moinspow, the houses are kept clean, but in general they are flithy, specially their survoundings, and here and there crowded together. Conservancy nil, people detecate in jungles, pits full of cow-dung, retuse, &c. &c. &c. are those when the cow-dung, set as of houses, &c. in foure places the cow-dung, &c., are thrown out through a hole in the cow-ched to collect outside, See also page 139 of this Report.	The habits of the people are generally cieal, and the houses are well ventilated and their auronalings kept free of filth to a great extent. But instances of filthiness are not rare, an instance being Ullapara when a collection of retines aimost fouching the thatched roof a house was seen. The dead are buried close to tanks and dwelling-houses. Jungle abounds. See also pages 10 to 10s of this Report.	See pages 101 to 104 of this Report.	See pages 101 to 104 and 129 and 130 of this Report.	See pages 101 to 104 of this Report,	Surface cleansing is attended to, and the sweepings, &c., removed out of town. There are only three public lairine which, however, are not much grequented, the people preferring the fields and other convenient places, the previous public methers, but the nistings if from them is strown on a spot outside the Municipality, while that from the public latrines if trenched. There are no well-prists, but and decase pits, containing fifth and cattle ordure, are numerous. The find retures from houses is allowed to run into the public drains. Interment and cremation, which are conducted outside the town and the disposal of the contagious disease dead, are not careful.	The people are very dirty in their habits, particularly the Sadgores. Cattle excreta, reliase and sweepings lie errywhere. Some of the villages are covered with rank vegetation and the ditches are fifthy, excepting in Esjungrar. See also pages 101 to 104 and 125 and 124 of this Report.
See also page 130 of this Report. See also page 130 of this Report. and simfleient water; but reemainton is carried on on the banks of some of them. In some piaces, however, the tanks are very bad- overgrown with weeds, &c., and dry up in the hot water is used. See also page 130 of this Report.	is taken from tanks and is generally sufficient and good. See also pages 101 to 104 of this Report.	Rivers supply water to several villages. See also pages 101 to 104 of this Report.	Ditto ditto ditto	Ditto ditto ditto	taken from wells and tanks. Of the former public ones which supply every flowes and three public ones which supply good pott-ble water. Of the latter one belongs to the Municipality which is reserved for durating purposes and has a flier connected with it. Most of the private single water, of which there are many, are choked up with vergetation, and into some, house refuse and washings find their way. On the whole the water-supply of this town is extremely bad in quality and insufficient in quantity.	Is taken from tanks which are generally bad, shallow and silted up, and their hanks are fouled. See also pages 101 to 104 and 123 and 124 of this Report.
There are is good,	Drainage is fairly effective, but the ground is low-lying and maraly. See also pages 101 to 104 of this Report.	The villages are situated on elevated ground, and the natural dramake is consequently good. See also general account pages 101 to 104 of this Report.	Ditto disso ditto	The viliages are situated on elevated ground. See also pages 101 to 104 of this Report.	The natural drainage is good, but owing to interference with 16 ye exavations made for earth for building muposes, pools of water collect in the excavations during and after the rains. The drains are puces and kutcha. The former are deep and narrow, built over in several places, communicate with the tanks, and are encreached upon considerably. The condition of some "I the bouse drains is very tad. Many houses have no drains; and the fluid refuse finds its ways into cess-pools or hollows.	See pages 101 to 104 and 123 and 124 of this Report The Kajunggar village is well drained.
7.	.5	*	2	12	1.01	118
iè.	ģ	ş.	81.	ls.	95	å
56	12.21	11.70	70.11	13.61		16-97
i	i	80.	盏		<u> </u>	
99,364	78, 809	99,123	208*98	32,688	249,7	118,891
Kotalporo—Raral	Indas - Burot	Rard.	Raipur—Bural	Simlepel-Rerat	Suri-Town	Suri-Berat
Bantur	Bankura	Bankura	Bankura	Bankura	Birbbum*	Birbhum

* For a general account of the Sanitary condition of the Villages in this district, see pages 101 to 104 and 123 and 124 of this Report.

App	Arl	· .		YCAIII		,	, , 0+8 90
S THE HEADS OF-	Domestic cleansing.	Domestic cleanliness is not observed, particularly sin villages inhabited by Sadgopes and Mahomedana. The sanitary condition to one of the village-Heamporebounging to, a Rajah, is better than the average standard. Here the tanks are clean and contain good, wholesome water and do not day up; there are two roads; and household cleanliness is observed. See also pages 101 to 104 and 123 and 124 of this Report.	101 to 104 and 123 and 124 of this See pages 101 to 104 and 123 and 124 of this Report. See pages 101 to 104 and 123 and 124 of this Report.	There is no conservancy; people defocate in fields and gardens. See also pages 191 to 104 and 124 and 124 of this Report.	The houses are not properly ventilated. There is no conservancy. People delevate in fields and gardenis. Cow-dung as accumulated in pits for manure. Some of the vulgares are honey-ambed with excayations and hollows containing singnant water. Sweepings, refuse and cattle litter are accumulated before dwellings. In some villages the house flows are leeped with a mixture of red earth and water which keeps them "note and free from infection." In some places dead cattle are thrown in the direbes. See also pages 101 to 104 and 123 and 124 of this Report.	is Report.	Some of the houses are crowded tosether. There is no conservancy. Manuse and rubhish heaps are to be met with. See also pages 101 to 104 and 125 and 124 of this Beport.
SANITARY ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	Water-supply.	Water is taken from tanks many of which have silted up. In places it is naturally good, but allowed to run bud. In a few places it is good and clean. See also pages tol to 104 and 127 and 124 of this Report.	See pages 101 to 104 and 123 and 124 of this Report.	Water is cheefy taken from tanks. It is charged with lime. Surfural water-courses called Kundus, which crist in this thana, are also reserted to. See also pages 101 to 104 and 123 and 124 of this Report.	Is taken from tanks and ponds, the latter are highly polluted and the former contain dwayed vegetation and are founded by defrecation. In the dry season water is scarce. The water of those tanks, into the formation of the beds of which lime-choose enters, is said to be cloudy or to have a whitish tint, but it is wholesome. See also pages 101 to 104 and 123 and 124 of this Report.	No particulars are yet available: but see general account on pages 101 to 104 and 123 and 124 of this Report,	Is taken from tanks, some of which are good, some bad, and some choked with weeds, &c., and from ponds and nuddis which are generally filthy. When the tanks dry up great water difficulty is experienced. See also pages 101 to 104 and 128 and 124 of this Report.
SANITARY BST	Drainage.	Drainage is bad; in some places water. logering occurs during the rains. See also pases 101 to 104 and 123 and 124 of this Report.	%ee pages 101 to 104 and 123 and 124 of this Report.	See reges 101 to 104 and 123 and 124 of this Report.	Drainage is bad in places causing rain water to starnate. See also pages 101 to 104 and 128 and 124 of this Report.	No particulars are yet available : but see gener	Some of the villages are situated on high, and some on low ground. See also pages 101 to 104 and 123 and 125 of this Report.
1 380	Bowel-com- plaints.	13	2	ž.	E.	20.	F 0.
EATHS P.	.втеболО	20.	è	\$	24 12	88.	55.
RATIO OF DEATHS PER 1,040 OF POPULATION PROM	Kever.	12:50	13.20	16.51	8.	12.41	13.60
1,000 01	Small-pox,		i		55		!
	.noilaluqo¶	126,586	87,778	107,803	122,723	88,836	133,897
	Name of Circle.	Dabrajpore— <i>Rural</i>	Rampore Hat—Zural	Bolpore—Rural	Sakulipore—Rural	Moureswar-Eural	Nalhati—iochding Pulsa— <i>Eural</i> .
	District,	Birbhum	Birbhum	Birbhum	Birbhum	Birbhum	Birbhum

Midnapur	Midnapur – Toses	83, 660	89.	33 50	1:51	99.8	The drainage, although not very bad, is still It defective. The purca drains are generally obstructed, and the kutcha ones are defective in level. The cleanang of the drains is, moreover, not properly attended to.	Is taken from the river Cossie, tanks and wells. None of the tanks have been reserved for drinking purposes, but, on the whole, the wafer is not grood. The wells are for the most part prot-cted although not sufficiently, and yield fairly potable water. A good and sufficient water-supply is the chief want in this town.	The conservancy arrangements are yet defective. Surface cleansing is attended to, and the sweepings, filth and nivide coolid disposed of in the usual mannier. There are public and private latines and urinals and more of the former are to be provided. The private privise are cleaned by the municipal mediens, suit promiseuous defectation is carried on to slarge extent, the nighten are numerous four pits, tanks and water holes; and cuttle dung is stored for manure within house premises. The arrangements for the disposal of the dead are not quite substactory.
Midnapur	Midnspur—Beral	128,646		17.96	99.	1.75	Where the sites of the villages are high the natural dramage is good. Road-safe drama are to be rarely met with as most of the roads consist of foot-paths. See also pages 128 to 130 of this Report.	River water is used where obtainable. There are many ponds which are merely dirty ditches with (cul water. Tank water is also used, and it is bad. See also pages 128 to 130 of this Report.	The houses are mostly ill-rentilated and their surround- ints fithr. Conservancy nil. Deferation is promis- cuous. House sweepings and cow-dung are accumu- lated near the houses for manure. Several villages abound in jungle. See also pages 128 to 130 of this Report.
Midnspur	Ghatal—Town	12,638	i	94.9	1.97	174	Drainage is defective, but the drains are maintained in good order.	Those who reside near the river obtain their water from it, the others take it from tanks. None of the latter has been reserved exclusively for drinking purposes.	Surface cleansing is attended to. There are 10 public latrines which are cleaned twice a day, but ther are insufficient. The night-soil from them and the private privites is removed and buried cutside the town. Cesepits exist. Burnals within the compounds of houses is carried on.
Midnapur	Ghatal - Rwral	71,455		11.97	9	*	so page 130 of this	Is taken from tanks which are generally bad and in places insufficient. In some villages, however, there are good tanks with puces ghats, exclusively reserved for drinking with separate tanks for other purposes. See also page 130 of this Report.	The houses are ill-ventilated. Conservancy viil. Defea- cation promiserous, Cowsheds kept unclean. The pathways are kept filthy. Sweepings and refuse are generally accumulated for manure citee to houses. Some of the well-to-do have private latrines. In some places cremation takes place on the banks of tanks. See also page 130 of this Report.
Midnapur	Chundrakons—Toun	12,257		9.70	29.	35. 50	The natural drainage is good. The roadside dains are kept in good order and the roads provided with water-ways. See also page 131 of this Report.	1s derived from tanks which are said to be kept clean by the owners. A large tank in the centre of the town has been recently reclaimed. See also page 131 of this Report.	Surfage cleansing is imperfectly attended to. Cultivators purchase house refuse and remove it to their fields. There are no public latrines. The night-soil from the prisate latrines is buried in or thrown on the paddy fields. The arrangements for cremation and interment are uncontrolled and the burial-ground in the centre of the town is in bad condition. See also page 131 of this Report.
Midnapur	Chundrakons – Kural	61,535	5	38.41	1.24	1.57	Drainage is absent. See also page 130 of this Report.	See also page 130 of this Is taken generally from flithy tanks. In villages bordering on rivers drinking water is taken from them. In places where ponds exist they are filthy, but see not used for this purpose. In some places there are wells provided with party pets, but generally they are unprovided with this precantion. See also page 130 of this Beport.	The houses are ill-rentilated and their surroundings fifth, but their florts are leeped with cow-dung. There are set reely any reads. Conservancy nil. Deflecation is carried on in the jungles. Carasses are thrown on waste lands. See also page 130 of this Esport.
S Kidnapur	. Ramitbunpore—Toun	10,309		8.8	113	1.46	The natural drainage is good, but there is no main drain to carry of surface drainage. The side drains are non-effective, definent in outfall and levels, obstructed, and waterlogged in places.	Is taken chieffy from tanks and ponds. They are numerous, but very few of them are protected and contain wholesome water, while most of them are overgrown with weeds and aquatic plants which impart a repulsive odour to the water.	Conservancy is very defective. There are no public latrines. Pefercation is carried on in fields, and on read sides and banks of tanks. The streets are not swept and the drains are full of zarbace, &c. In some of the busts heaps of refuse and cow-durk are pitted for manure.
		- Marie	00000	100	and of	of the Genite		andition of the Villages in this District, see pages 101 to 104 of this Report.	Report.

· For a general account of the Sanitary condition of the Villages in this District, see pages 101 to 104 of this Report.

		 	RAT1	to of DE Pretta	RATIO OF DEATHS PER 1,0500 OF POPULATION PROM-	, , , , , , , , , , , , , , , , , , ,	SANITARY R8TI	SANTARY ESTIMATE OF THE VILLAGENIN EACH CIRCLE UNDER THE HEADS OF-	I THB HEADS OF-
District,	Name of Circle.	.noitaluqo'l	Small-p.v.	Peron.	Сројета.	Bowel-com plaints.	Бгаїраке.	Water-supply.	Domestic cleansing.
Midnapur	Tumluk – Roral	080'08	10.	8.76	g) a1	15.	See pages 101 to 104 of this Report Si	See pages 101 to 104 of this Report	See paxes 101 to 164 of this Report.
Midnapur	Muslandpore-Rural	80,569		9.62	3.76	\$55	See pages 101 to 104 of this Report It	Is taken from tanks which are fairly good, and from pouds. See also pages 101 to 104 of this Report.	See pages 101 to 104 of this Report.
Midnspur	Contai-Rural	130,554		13.53	\$2. \$	25.55	See page 130 of this Report S	See page 130 of this Report	See page 130 of this Report.
Midnapur	Gurbetta—Rura	135,786		14:39	67	. i.	ee page 130 of this Report S	See page 130 of this Report	See page 130 of this Report
Midnapor	Narsingurh—Bural	129,199	i	18.15	174	=	Particulars are not yet available, but see general account en mage 101 to 104 of this Report.	il account on page 101 to 104 of this Report,	
Midnapur	Dantun—Rural	128,447	광	18:10	45 15	\$	Particulars are not yet available, but see general account on pages 101 to 104 of this Report.	ul account on pages 101 to 104 of this Report.	
Midnapur	Gopiballubpore-Rural	139,928	:	15.20	ş	16.	Particulars are not yet available, but see general account on pages 101 to 104 of this Report.	al account on pages 101 to 104 of this Report.	
Midnspur	Jakkram—Rural	59.793		13 %	89.	1.15	Particulars are not yet available, but see general account on pages 101 to 101 of this Report.	l account on pages 101 to 101 of this Report.	
Midnapur	Salbani— <i>Raral</i>	53,617		15.86	7.7	1.38	No drainage. See also pages 101 to 104 of I	Is taken from wells, tanks and ponds. The wells are in very bad condition and unprotected from pollution. Many of the tanks are full of imme and weeds, and are generally used for all purposes. The provid, which are numerous, are all fifth. In some villages scarcity of waker is greatly felt. See also pages 101 to 104 of this Report.	The houses are ill-ventilated and crowdedkogether. Their fruits are generally kept clean, buthouse averpings are collected behind them or in excavations. Jungle abounds. Conservancy absent. See also pages 101 to 104 of this Report.
Midnapur	Binpur-Rural	80,70 4	i	19.78	 %	7 .	No particulars are yet available, but see general account on pages 101 to 104 of this Report,	account on pages 1v1 to 104 of this Report,	
Midnspur	Keshpur-Rural	96,609		16.51	.82	92.	See page 130 of this Report	See page 130 of this Report	See page 130 of this Report,
Midnapur	Despur—Bural	115,269		15.41	1.83	1.41	See pages 101 to 104 of this Report	See pages 101 to 104 of this Report	See pages 101 to 104 of this Report,
Midnepur	Debra-Bural	70,126		19.22	9.	Ģ.	No particulars are yet avaisable, but see general	urticulars are yet available, but see general account on pages 101 to 104 of this Beport.	
Hidnapur	SabongBural	\$01,714	50	17-25	16.	\$	See page 130 of this Report 8	See page 137 of this Report	See page 130 of this Report.

Midnapar	Panskurah Raraf	148,061	-0.	14.84	1.38	1.32	See page 130 of this Report See	See page 130 of this Report	See page 136 of this Report.
Midrapur	Suttahatta-Rural	64,624	!	29.7	175	3.92	See page 130 of this Report • See	See page 130 of this Report	See page 130 of this Report.
Nidanpur	Nundigram-Rural	121,895	i	11.55	3.44	19.1	See page 130 of this Report See	See page 130 of this Report	See page 130 of this Report.
Ridnspur	Reghunathpur—Rural	62,124	40	11:23	8.12	£4.8	No particulars are yet available, but see Fr pages 101 to 104 of this Report.	From tanks smod and had and from excavations. See also pages 101 and 104 of this Beport.	Some villages contain several two-storied hothes. Excastations. chok-d with vecetation, are common. See also pages 1.1 and 104 of this Report.
Midnapur	Bgra. Lural	68,417		18.25	6.00	8.10	See page 130 of this Report See	See page 130 of this Report	See page 130 of this Report.
Midnapur	Khajri—Rural	42,126	i	11.71	3.01	1.78	1.78 Particulars are not ret available, but see general ac	srailable, but see general account on pages 101 to 104 of this Report.	
Midnapur	Pataspur—Rural	87,324		18.25	178	: :	Particulars are not yet available, but see general account on pages 101 to 104 of this Peport.	ecount on pases 101 to 104 of this Leport.	
Midnspur	Bhachangur—Rural .	96.451	1	12.65	1.2	9.	Particulars are not yet available, but see general account on pages 101 to 104 of this Report.	account on paces 101 to 104 of this Report.	
* Hughli	Hughli - Toson	38,718	İ	19.61	613	97.9	The drainsge is not satisfactory. The principal outlets of the main channel are defective. The drains after running in opposite directions from the river in along winding course discharge into it. The kutcha drains phave not sufficient fall.	Is taken chiefly from the river and from three tanks reserved for driving. The quality of the rainer water is said to be good, except during the rainy season. The above mentioned tanks are protected from polution, but the other tanks, of which there are many, are in bad condition with dense foliage trees and bambons over-hanging them. In the parts of the town away from the river water difficulty is felt.	The conservancy arrangements are not quite astisfactory. Surface cleansing is looked after, but not sufficiently as the establishment is inadequate for the purpose. The sweepings, &c., are used in filling up pits and low lands. There are 11 public latrines, but they are insufficient. The private privies of the foculties where Part IX of the Municipal Act is in force are under the management of the Municipality. There are no well-privies, but pr miscuous defeccation is still carried on. The night-soil is trenched, and one of the trenching properly disp-sed of, but cess-pits and foul hollows exist in and near houses. The arrangements connected with in and near houses. The arrangements connected with interment, as burials in the compounds of houses are permitted.
Hughli	Hughli-Rural	15,458		28°.52	7.24	3.62	Particulars are not yet available, but see general account, pages 101 to 104 and 134 to 126 of this Report.	account, pages 101 to 104 and 134 to 126 of this Rep.	•
Hughli	Kotrung—Town Bansberiah—Town	Data not available Ditto	vailable	11	: :	i i	See page 127 of this Report See See page 127 of this Report See	See page 127 of this Report See page 127 of this Report	See page 127 of this Report.
S Buthi	Jehanabad—Tour	10,507		.9. 24.	7	8	The drainage is very defective. The municipal is drains are created, but bruse drains are not attended to and are in bad condition. See also page 127 of this Report.	Is taken from the river, and is reported to be good. See also page 127 of this Report.	The conservancy arrangements are not satisfactory, Sufface cannaing is not attended to. There are only two public latrines. The condition of the private latrines is bad. Nuch-soil dress not appear to be trenched. Defrection is promiserous. The arrangements connected with the disposal of the dead are unsatisfactory. See also page 139 of this Report.
•		• For	a gene	For a general account of the Sanitary	unt of t	he Sa	1 .	condition of the Villages in this District, see pages 101 to 104 of this Report.	port,

			RATIO OF P	OF DEAT	RATIO OF DEATHS PER 1,600 OF POPULATION PROM-	1,900	SANITARE ES	SABITARY HEITMATE OF THE VILLAGES IN RACH CIRCLE UNDER	DER THE URLDS OF-
District.	. Name of Circle.	Population.	Small-pox.	Fever.	Cholers.	Bowel-com- plaints,	Drainage.	Water-supply.	Domestic cleansing.
Hughli	Jehanahad – Burai	206'668		11.78	à	1.70	See page 101 to 104 and 124 to 126 of this Report, 1	Is taken from tanks which are used promisciously and are more or less polluted, and from rivers where they run, but the dead are thrown min them. It was observed that luce tanks which are strated outside of villages generally contain potable water. In villages away from rivers the water-supply is insufficient. See also pages 101 to 104 and 124 to 126 of this Report.	The spaces between the houses abound in superfluous vegetation. The paths and drains are in a hithy condition. The villages, particularly those inhabited by Mahomedans, are surrounded with jungle, the growth of which is encouraged in order to protect the females more effectually from public view. See also pages 101 to 108 and 124 to 126 of this Report.
Hugbli	Polbah or Bansberiah- Baral.	46,173		17.28	7	2	rticulars are not yet available, but see general	ars are not yet available, but see general account on pages 101 to 164 and 124 to 128 of this Report.	port,
Hughli	Dhuniakhalli—Eural	93,537	I	17.97	F.	1.67	me as in Jeltanabad	Same as in Jehanshad	Same as in Jehanabad.
Hughli	Ballagur—Rerof	48,218	1	19:99	2.12		Same es in Jehanabad	Same as in set-anabad	Same as in Jehanabad.
Hughli	Pandush - Reret	66,113	89.	31.53		8	Drainage is defective in some places, good in others. The villages are liable to be flooded during the rains. See also pages 101 to 104 and 124 to 126 of this Report.	Is taken from tanks and bunds. Some of the former are large and good, some muddy and some dry up. The inter are generally choked up. In some places the bhis supply water. See a.co parce 161 to 104 and pages 124 to 125 of this Report.	Some rillages are full of jungle and trees. The houses are neat and elem and dry, but ill-rentilated. Conservacy wincy ill and deforeation is carried on in fields, gardens, and on road sides, banks of tanks, &c. See also pages 101 to 164 and 124 to 126 of this Report.
Haghli	Khanacol-Reral	133,500	10.	00 6	58		See pages 101 to 104 and 134 to 136 of this Report.	See pages 101 to 104 and 124 to 126 of this is taken from tanks and ponds. The former contain good water in some villages and bad in other. Water from the Kaus nuddi and bamuda is also used large.ly. See also pages 101 to 101 and 124 to 126.	The houses are neat and clean, but ill-ventifated. No conservancy. Defocation takes place in fields, gardens and jungle. In some places cows are kept in the dwelling-houses. See pages 101 to 104 and 124 to 126.
Haghli	Goghat-Rural	111,121	1	1615	1.6	66.	Same as in Jehanabad	Same as in Jehanabad	Same as in Jehanabad.
i iidagah	Serampore—Towns	3	20.	12:63	29.1	80 60	Drainage is defective. Almost all the drains are kutcha and rather deep, and many of these as well as some pucta ones are obternoted. The condition of the howe drains is unsatisfactory. A proper system of surface drains and the filling up of the many excavations are much needed.	Is taken from the river Hughli and tanks. The river is foulted in various ways. The tank water is not fit for use, none of them having been protected from pollution and set apart for drinking purposes.	The conserrancy arrangements are not quite astisfactory. Surface cleansing is properly attended to, excepting in the bre-lanes, and the sweepings, &c., are employed in filling up ponds and levelling low sites. The fluid refuse from some of the houses is said to be removed, and buried. The drains and houses scavenging are not well looked after. There are nine public latrines, but more are needed. The private latrines in two of the wards are cleaned by municipal mehters. Promisouous defencation is largely earried on. The night-soil is tree thed. There are himmerable filthy pits, tasks and raker holes. The arrangements connected with intern. uts are not estimatory. The sanitary condition of the cooly hustis is bed with regard to cleanliness, viutilation, drainage, roads, &c.

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Report.	2:39 Particulars are not ret available, but see general account on pages 101 to 104 and 124 to 125 of this Report.	Particulars are not yet available, but see general	£ 33	22	12.79		55,107	Krishnagore—Rural .		Hughli	표
No conservancy. Defectation is carried on on road sides and hanks of tanks. See also pages 101 to 164 and 124 to 126 of this Report.	See pages 101 to 104 and 124 to 126 of this Is taken from tanks, some of which are large and gnod, while others are highly contaminated. See also pages 101 to 104 and 124 to 126 of this Report,	See pages 101 to 104 and 124 to 126 of this Report.	1.69	75.	10.35	!	84,387	Chunditola - Rural	: :	Hughli	描
Same as in Jehanabad,	Same as in Jehanabad.	Same as in Jehanabad.	77.2	57.	13.36	ē	84,933	Haripal-Rural	:	Hugbli	H
Surface cleansing is attended to, but not sufficiently, the establishment being madequate. The sweeplings, &c., are thrown into hollows. There are cres-pools which are not always clean. Night-soil is buried outside of but near the town. There are no urnishs. There are many starnant ponds and large excreastions. The dead are buried in the compounds of houses. See also page 127 of this Report.	Is taken from the river and tanks. See also page 127 of this Report.	Drainage is defective. Most of the drains ar- kutchs and require constant attenton. The main drain passes through the Mukta mulsh, and cannot be kept clean. See also pagel 127 of this Report.	85.5	3.63	12.1	•	5,510	Utterpara—Toren	•	Hoghli	l A
The houses are not properly ventilated. Juntle abounds in some villages. The paths, drains and passages between houses are in a lithy condition, and abound in vegetation. No conservancy. People defects in fields or gardens.	Water for drinking is taken from tanks and ponds and is also used for culinary and washing purposes. Where khals exist their water is utilized.	The drainage is defective in many places. The villages are liable to be flooded during the rains.	89.50	2.79	12.30	i	181 gg	Singboor or Boidys- battl-Raral,	1	Hagali	Ħ
Surface cheansing is fairly attended to. There are four public latrines and four urinals. The private privies are oof in a surfactory condition. The night-soil from the latrines and the offal from the slauchter-houses are buried in two fields set apart for the purpose. Heaps of rubbish are to be found, outside the dwellings, as there are insufficient to remove them. Jungle abounds. See also page 127 of this Report.	Drainage is not satisfactory. There are many Is taken from the river and tanks. There are excavations and the drains are encroached; numerous unclean tunks and ponds. See also upon and obstructed. See also page 127 of page 127 of this Report. this Report.	Drainage is not satisfactery. There are many Is taken from the river and tanks, excavations and the drains are encroached in numerous unclean tanks and pond upon and obstructed. See also page 127 of page 127 of this Report.	2.3	2.37	7.33	İ	14,718	Boidysbatti – Toren	•		Haghli
Report.	Particulars are not yet ayailable, but see general account on pages 101 to 104 and 124 and 125 of this Report.	Particulars are not yet ayailable, but see general	1.38	1.38	18.9	1	21,620	Serampore-Rural	i	Hughli .	H

Imminate is on the whole defective. The same is taken from the river Huchli and tanks. The growth water and subscribed, and a scheme for a filtered water-supply is under an operation and a scheme for a filtered water-supply is under an operation of sewage from a new root of majors of sunking any properly cleaned, and those in or behind busits generally become a series of sunking pole. The cond-side series of sunking pole which will allow this every the contemplation. The drains are not properly cleaned, and those in the original parties of sunking pole. The cond-side series of sunking pole. The cond-side series of sunking pole which will allow this every the contemplation. The drains are not properly cleaned, and the contemplation. The drains are not properly cleaned, and the contemplation. The drains are not properly cleaned, and the contemplation of the numerous are not properly complained to discharge its contemplation. The same which will allow this taken the southern portion of the busits not yet reclaimed is bad, in a spirate or the contemplation.
Is taken from the river. Huchli and tarks, The water from these sources has been condenned, and a scheme for a filtered water-supply is under consideration.
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90 is
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Ноwrah Боwтаh—Тонси
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*Howrah

* For the general Sanitary condition of the Villages in this District, see pages 101 to 104 and 124 to 126 of this Report.

rpp.	12. ,	be, ound trion.	o pri- ied on a and tre-s. their s and	where, resort to 126	. 1			
SANITART ESTIMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HEADS OF-	Domestic cleansing,	Surface cleansing is attended to, but the sweepings, &c., are accumulated for ultimate utilization. The ground is covered with under wood and norious vegetation. There is only one public latrine. The private private are cleaned by private arrangement. The night-sell is trenched? See also page 128 of this Keport.	No conservancy. Here and there are a few private private which are not kept clean. Deferention is carried on on road-sides and banks of tanks, and in junsies and on fields. Some villages are full of jungle and forest trees. Cowdumg is used as fuel. The Mahomedans bury their dead in their own lands. See also pages 191 to 164 and 124 to 126 of this Report.	No conservancy. Defaccation is carried on everywhere, particularly during the rains when people cannot resort to the fields. See also pages 101 to 104 and 124 to 125 of this Report.	See jugges 101 to 104 and 124 to 126 of this Report.	Same as in Khanacool and Jehanabad in Hughli.	Report.	
	Water-supply.	taken from tanks which receive the surface rainage of the town. Good tanks are a desicatum. See also pige 128 of this Report.	Water is taken from tanke and choked up pends. Many of the tanks contain good drinking water. See his, pages 101 to 104 and 124 to 126 of this Report.	Water is taken from tanks and ponds. See also pages 101 to 104 and 124 to 126 of thus Report,	See pages 101 to 104 and 124 to 126 of this Report.	Jehansbad in Same as in Khanacool and Jelianabad in Hughli.	ars are not yet available, but see general account on pages 101 to 104 and 124 to 126 of this Report.	Particulars are not yet arailable, but see general account on pages 101 to 104 and 124 to 126 of this Report.
	Drainage.	Drainage is very defective. The surfacedrain- Is are passes through several tanks before discharging into the main drains, and there are numerous small tanks, thoise and low lands numerine with drainage. A survey is to be made and levels taken for "omplete drainage scheme, bee also page, 129 of this Report.	Drainage is good. See also pages 161 to 104 and 134 to 126 of this Report.	No particular are available, but see pages 101 to 114 and 124 to 126 of this Report.	See pages 101 to 104 and 124 to 126 of this Report.	Same as in Khanacool and Jehanabad in Hughli,	Particulars are not yet available, but see gene	
00071	Bowel-com- plaints,	3.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7	1	3.01	3.02	4.01	3.31	3.84
HS PER I	Cholera.	<u>o</u>	E. S	ķ	1.40	19.	1.89	1.53
RAIIO OF DEATHS PER 1,000 OF PEPULATION PROM-	E6V.P.	£.	8	873	10.62	9.18	9.18	6.5
	.roq-llam8		<i>1</i> 00.		<u> </u>		_	-
	Population.	14,815	778,821	81,345	77,539	109,969	63,563	68,861
	Name of Circle.	Bali-Toers	Dumjoor, jechuding Sankral—Kural,	Oluberiah—Rural	Jakut bullubpore— Kutal.	Austą – Berot	Bagnau - R#ral	Syamput—Rural
	District.	Howrak	Ночты	Howrah	Bowrah '	Ноитар	Ноwтьћ	Ночтаћ

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The work connected with surface cleausing and general conserrancy is carried on by a contractor. It is executed unsatistactorily, and the townse not, on the whole, in the cleanly condition defenble, There are 46 latrines, but only 3 of them fare free to the private private private are also under the care of the contractor, and the inglances are not rare in which both the public and private latrines are filthy and badly managed. The mith-soil is trenched also be contractor. Although much improvement has been effected in the busits, there are still several which are dedicient in all sanitary requirements filth abounding everywhere. Of the busits those in which castle are keep the worst. Here dung, litter, &c., are to be seen lying about in heaps, festering under a hot san. The burial arrangements are very mustifisactory. See also pages 101 to 104 and 131 to 133 of this Report,	The conservancy arrangements are very defective. There are no public latrines. Defecation is carried on generally in grandens, dense jungles, sides of roads, &c. There is a large number of fully growable burst, and figuid cowdrame and urine are seen everywhere overflowing the huge pits in which they are deposited. See also page 136 of this Report.	There are no conservancy arrangements. Detreation is carried on everywhere. Sweepings and house-refuse are not removed. See also pages 101 to 109 and 124 to 136 of this Report.	The conservancy arrangements are very faulty. Surface obtains is attended to, but not sufficiently. The sweepings, &c., are thrown on the fields. There are no public latrines, and few private ones. The people deficient and commit other unisarces on the roads, and in fields and gardens. The mighael from the private latrines is removed by private mehters.	The conservancy arrangements are imperfect. There are no public afrines; cess-pools full of sweepings alid house retuse exist; night-srill passes into them; and the drains in the bazar are never cleaned.	eport.	The conservancy arrangements are defective. There is only one cart for the removal of refuse, and as surface cleanang is quite inefficiently done. There are no public latrines. The cremation ground is near the batar.	Beport.
Is on the whole very unsatisfactory. It is taken from the river and tanks. The tanks in the intervo belonging to private individuals are kept clean, but those in the densely populated portions of the town are highly polluted and very filtly. The Europeans, and the well-don natives who can afford to pay for it, olviant their waters supply from the Cacutta hydrants. It is under contemplation to extend the Calcutta waterworks sheme into these parts of the Suburbs which are proposed to be amaleamated with the Calcutta Municipality. See also pages 101 to 144 and 131 to 133 of this Report.	Is taken from tanks. There are five good tanks, but most of the others are foul and overgrown with weed, and rank vegetation. The water of Iolly's Nulls and Kaorapooker kind is also drank. The fivener is considerably foured. The water-supply fisher is to he whole, insufficient. See also page 128 of this Report.	The drains are without 1 is taken from tanks which are all filtry, and the see form from tanks which are all most black, which is used for See also pages 101 to 109 kepurt, Report,	ctire. The outfall is definite the latter is unwholesome. are wanting in levels.	Is taken chiefly from the Hughli river. Some people, chiefly Mahomedans, druk tank water.	er available, but see general account on pages 101 to 109 and 124 to 125 of this Report.	Is taken from tanks, mostly from a big tank which is polluted as it is situated in the midst of a growded locality, and is used for bathing and washing of utensits.	illages in this District, see pages 101 to 109 and 124 to 126 of this Beport.
The drainage is very defective, and whatever has been done to improve it has been underdrane or without any plan or design. The drains can sit of excavations on the sides of the road. They run anywhere and accumulate fine fith in different parts. Most of them ducharge into certain main drains which head either to Dhappa, the Baliaghatta act of ournag the rains and sub-uerge the fields. Stagrastion of waker is common. The drains steure constant attention, and sithough a special e-tablishment is enterfamed for this purpose, they are often neelected. A system of surface drains is urgently called for. See also pages 104 and 105 and 131 to 133 of this Report.	The drainage is fair, but there is still much room for improvement. In some places, however, the drainage is very defective, particularly in the eastern tracts. See also page 126 of this Report.	Drainage is defective. The drains are without levels, and the sewage of some flows into ponds the water of which is used for culinary pursoes. See also pages 101 to 109 and 12s to 126 of this Keport.	The drainage is defective. The outfall is defi- cioni, and the surface water scass into the ground, as the drains are not kept in good working order, and are wanting in levels,	3.66 The drainage is defective and obstructed in some parts.	No particulars are yet available, but see general	The drainage is defective. Earti is taken from the drams (which are all kuicha) for building purposes.	* For a general account of the Sanitary condition of the Villages in this District
8	11.38	1.12		9.8	Ş	;	itary o
8.7	96.	26.	*5. S	8 15	ês	92.2 20.2	the Bar
14:27	97 15	15.52	14.39	18:37	11.82	5.81	unt of
3	.		İ				al acco
261,439	61,638	\$7,79	82,739	18,019	21,680	20,450	or a gener
Suburbe of Calcutta	South Suburban— Town.	Tollygunge - Burel	Agurpara or South Barrack porto-Town.	Nawabeunge or North Barrackpore Tourn.	Barrackpore, including Cantonment - Rural.	Bussirbat—Town	*
2+Pergunnahs*	24-Pergunnalis	24-Pergunnaha	24-Pergunnaha	24-Pergunnshs	24 Pergunnaha	24-Pergunnahs	•

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Water-upply. Bomestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Domestic cleansing. Water-upply. Surface cleansing is attended to, and the sweepings, &c., in the theory where. The dead are inputed in thing up bollows, or they are deposited in the thing into interpret or the thing interpret or the thin		There is no drainage aystem and no drains. See also pages 101 to 1169 and 124 to 126 of this Report. The dramage is defective, but st. ps for its improvement are being taken. No particulars are yet available, but see general The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic The drainage is fair, but not systematic	Bowel-room-	100 S	16.66 16.6	A i i i i i i i i i i i i i i i i i i i	.moilelingo 7 53 62 75 62 75 75 75 75 75 75 75 75 75 75 75 75 75	Name of Circle. Bussirhat—Rurat North Suburban— Town Sonarpore—Rurat Naihatti—Town Naihatti—Rurat Baduria—Town Baduria—Rurat	Pistrict. 24-Pergunnahs 24-Pergunnahs 24-Pergunnahs 24-Pergunnahs 24-Pergunnahs
Some villages contain pucca houses. See Aso pages 101 to 109 and 124 to 126 of the Report	Is taken from tanks, pomds and excavations full of weeds. See also pages 101 to 109 and 12s to 12s of this Report.	See pages 101 to 109 and 124 to 125 of this Report.	51.2°	26.2	13.03	i	81,578	Dum-Dum-Kerat	24-Pergunnahs
	1	The drainage is defective. There are no drains. There is a swamp extending along several villaces. See also pages 101 to 109 and 124 to 126 of this Report.		3 9	16.64		104,606	Baduris – Esra?	
Surface cleansing is attended to, but not efficiently. There are no public latrines. The eight-soil from the private latrines is thrown on the fields or into the river.	Is taken from the river and the numerous tanks in the town.	i	1.09	8.18	6.18	ફ	19,135	Baduria—Town	j j
See pages 101 to 103 and 124 to 125 of this Report.		101 to 109 and 124 to 126		3.55	135 281	•	65,439	Naihatti—Raral	j.
	(The drainage is fair, but not systematic	2.20	5.10	05.FI		21,533,	Naibatti—Tveon	1
eport,	acccunt on pages 101 to 109 and 124 to 136 of this Re	No particulars are yet available, but see general		1.73	15.34	£0.	31,858	Sonarpore-Rural	
See page 127 of this Report.	:	page 127 of this Report	88	.31	16.5	i	10,576	Rajpur—Town	- 1
	Is taken from the river and tanks. It is sufficient, but much political. Necotation is taking place for the extension of the Calcutta water-works, scheme to this town.	st. ps for its	8.	8-1-	11.64	3	79,86		j.
1	Is taken from rivers and tanks which are full of weeds and fithy. See also pares 191 to 109 and 124 to 126.	There is no drainage system and no drains. See also pages 101 to 109 and 124 to 126 of this Report.	\$	\$1 61	15.87		53,987	Bussirhat—Rural	í
Domestic cleausing.	Water-supply.		Bowel-com-	Cholera,	L'oact.	Smell-por.	Population.	Name of Circle.	trict.
DER THE HEADS OF-	SSTINATE OF THE VILLAGES IN EACH CIRCLE UNI	SANITARY B	1.0f0	THS PER ION PRO	OP DEAT	RATTO OF P			

24.Pergunnahe	Barnet-Bural	73,131		19.08	F	4.	See pages 101 to 109 and 424 to 128 of this Report.	From tanks and choked up ponds which are general. See also pages 101 to 109 and 124 to 136 of this Report.	The houses are seattered. Many villages contain thick bamboo topes and trees and many excavations. See also pages 101 to 109 and 124 to 126 of this Report.
24-Pergunahs	Hosemabad and Takee-Ryral.	67,227		18.33	02.4	1.03	See pages 101 to 109 and 124 to 126 of this Report.	Taken from tanks covered with weeds. See also pages 101 to 109 and 124 to 126 of this Report.	See pages 101 to 109 and 124 to 126 of this Report.
24 Perguanalia	Bariepore—Reral	75,830		11:44	16.1	**	The ground being generally elerated, the natural drainage of the villaces is good. See also pages 191 to 109 and 124 to 1.56 of this Report.	From tanks and ponds, some of which dry up during the hot season, and everal are bad and several in prefty good condition. See also pages 101 to 109 and 124 to 129 of this Report.	In some gillages the houses are crowded together. No conservancy. In some the pathways are used as larines. See also pages 101 to 103 and 124 and 125 of this Report.
24-Pergunashs	Joynagore-Town		Data n	Data not available.	ļa.		See page 127 of this Report	See page 127 of this Report	See page 127 of this Report.
2+Pergunnahs	Joynagore-Bural	76,140		3.7	18.4	22	Special account is not yet available, but see pages 101 to 109 and 124 to 126	ges 101 to 109 and 124 to 126 of this Report for general account.	al account.
24-Pergunnshs	Diamond Harbour-	52,623		8-57	21.3	4	See pages 101 to 169 and 124 to 126 of this Report.	See pages 101 to 109 and 124 to 126 of this Report	See pages 101 to 109 and 124 to 125 of this Report.
24-Pergunnahs	Atchipore-Rural	62,536		12.44	1.08	\$8.50 18.50	See pages 101 to 169 and 124 to 126 of this Broot.	See pages 101 to 109 and 124 to 126 of this Report	See pages 101 to 109 and 124 to 126 of this Report.
24 Pergumaha	Bistopore-Rural	נונ'ע		9.97	1.54	1.0	See pages 101 to 109 and 124 to 123 of this Report.	is taken from tinks and ponds. The water of the former is generally grout, but the latter are generally choked up. See also pages 101 to 109 and 124 to 126 of this Report.	The houses are neat and clean and dry, but ill-ventifated. No conservancy. Defercation is carried on in field gardens, and on readshes and banks of tanks. See also pages 101 to 109 and 124 to 126 of this Report.
24-Pergunaha	Bhangor Esrei	78,853	Ę,	14.88	83.	59	No drainage. See also pages 101 to 109 and 124 to 136 of this Report.	Is taken from shallow tanks which are full of weeds and dry un-also from khals and chuked up ponds. In some places wells are dug when the tanks dry up. In Afreabad no sweer wargris obtainable, and it has to be brought from elsewhere. See also pages 101 to 109 and 124 to 135 of this Report.	Personal clendiness is observed by the people generally. The houses are nest and tidy, but ill-ventilited, and their aurroundings are lithiv. Conservancy absent. The sweepings, house and cowashed retires are heaped near houses until wanted for manure. Excavations containing filthy and starnant wear abound. Defected from takes place on the sides of khals and everywhere. The dead are often interred in and near houses. See also pages 101 to 109 and 12s to 126 of this Report.
Fergunaps	Dergangs-Rural	53,516		17.71	\$4 30	8	See pages 101 to 109 and 124 to 126 of this Report.	See pages 101 to 109 and 124 to 126 of this Report	See pages 101 to 103 and 124 to 126 of this Report.
24-Pergunnahs	Habra - Bural	75,439		95.7-1	5.0		See parces 101 to 109 and 124 to 126 of this Report.	See pages 101 to 109 and 124 to 126 of this Beport	See pages 101 to 109 and 124 to 126 of this Report.
24-Pergunnahs	Barus – Zaro	183 ,082		11.91	\$0.	कृ	See pages 101 to 109 and 124 to 135 of this Report.	Is taken from shallow tanks, some of which are covered with weeds, or contain decomposing regetation, falling leaves, and refuse water. Nee also pages 101 to 109 and 124 to 136 of this Keport.	See pages 101 to 109 and 124 to 125 of this Report.
24 Pergunnahs	Canning—Baral	47,518		9.53	6.37	\$3	Special account is not yet available, but for gen	account is not yet available, but for general account, see pages 101 to 109 and 124 to 126 of this Report.	this Report,
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•		-	101		OF FULL ALLOW FROM				
District.	Name of Circle.	noitalugo.	.xoq-llam	вунг.	.areloit	ehrinda.	Drainage.	Water-supply.	Domestic cleansing.
Pergunals	3ultanpore or Kulpi-	F4 80,319	r8 :	A [5]			See pages 101 to 108 and 124 and 125 of this Se	See pages 107 to 109 and 124 to 126 of this Report. Se	See pages 101 to 109 and 124 to 126 of thus Report. C.
1	Rural. Devipore—Bural	43,455		8.83	- şs	1.8	101 to 1 f9 and 124 to 128	of this See pages 101 to 1.19 and 124 to 136 of this Report. Se	See pages 101 to 109 and 124 to 126 of this Report.
l .		707,275		8.6	3.03	15.	101 to 109 and 124 to 126 of this	Is taken from trnks, pends, and rivers. Some of The tanks are good, but some dry "p in summer. The sends are choked up, but most of them are used for culmary and either domestic purposes. See also pages 101 to 109 and 124 to 126 of 1318 Report.	The houses are ill-ventilated, but nest and clean, the walls of some being of interlared bamboo. No conservants and deforcation takes pisce in fields and juncted. Some villares anound in jungle and bamboo clumps. The dead are buried in the compounds of houses. Cowdume is used as fuel. See also pages 101 to 109 and 124 to 126 of this keport.
24-Pergunnahs	Mathurapore—Rwra?	50,463	A CAL	10.55		- F.	Special account is not yet available, but see gener	13 Special account is not yet available, but see general account on pages 101 to 109 and 124 to 126 of this Beport.	Beport,
Nuddos*	Kishnaghur – Toton	27,477		11.9	3.16	92	The drainage is very defective. The outlets are non-effective, and surface water takes days to run off. Almost all the drains, both nucca, and kutcha, discharte into the tank, earrymg into them all kinds of filth and unclean washings. The house sewage water also passes through the drains.	Drinking water is taken from the river. 51 tanks and 21 masonry wells. Two of the tanks and all the wells are well-proceed. The land around the rest of the tanks is not kept clean, and the tanks in the hed of the Anjona river are, with one exception, in a foul state. There are many private hadily-protected wells, but they are used for washing of clothes, &c.	The conserrancy arrangements are not satisfactory. Surface cleaning is attended to, the sweepings, &c., being put into hollows. House scaveigning is manification and house sweepings, reless, &c., are in some cent, and house sweepings, reless, &c., are in some cent, and house sweepings, reless, &c., are in some and accumulations of foul water abound. There are 15 of Major kamasay smortable latrines and one ordinary latrine. Major kamasay smortable latrines and one ordinary two wards are insufficient. 773 parvace privies in two wards are under municipal management. About 200 well-parvices will exist. The night-soil from all istrines is trenched. Defocation is carried on on the banks of tanks and low lands, and in drains, &c. The arrangements connected with the disposal of the dead arrangements.
- 1	Kishnazhur - Burol	77,887	_ _!	16-90	92.9	နိုး	See pages 112 and 113 of this Report	See pages 112 and 113 of this Report	See pages 112 and 118 of this Report.
: 1	Santipore-Towns		.,	26.9	.52 .53 .61	§2	The drainage is defective. There are drains to convey the surfave water to the river, but in some parts of the town it soaks into the soil. which is sandy, or drain, neto mis and low lands. See also page 117 of this Report.	Drinking water is taken from the rivulet and khale generally. Their water is said to be good. There is also one reserved tank with good water. Moreover every house has a well, and there are some private tarks. Their water is used for culturary hathing and other purposes. See also page 117 of this Report.	Surface cleausing is systematically attended to. House fluid retuse is not allowed to enter the drains. There are no public or private surface privies, but there is a large number of well-privies. In several cases burnis are carried on in compounds of houses, 'See also page 117 of this Report.

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The spaces between the houses abound in superfluous dirion. The paths and drains are-in filthy condition. The villages, particularly those galabites by Mahomedans, are surrounded with junge, the growth of which is encouraged in order to hide the females more effectually from public view. See also pages 110 and 111 of this Report.	Surfee cleanang is not attended to. The house reduce is allowed to lie about, and the house faint reduces is either absorbed or passes to the street drains. There is only one public latrium east the heast. Eight intials are also in it. There are 27 privies, and happily only one well-privy. The privite privies are under municipal managefact. The might-soil is removed to a place outside the town. Burials in compounds of houses is general, aithou, It there is a burial-ground and graves are duc only three to three and-shall feet deep. See also page 118 of this Report.	Same as in Santipore. See also page 116 of this Report.	Surface cleansing is attended to, the st sweepings being utilized in filling up vations. There are no public and I latrines, but there are 600 well-privies, 116 of this Beport.	The inhabitanta, chiefly Mahomedans, are uncleanly in their hality, but the Hindu villages are cleaner. The fluid refuse from cowhoders is allowed to he about them, and the cow-dunx issuoreden pits. Where there are Goverial busts they are they revy filty and are covered with rank vegelation. Some villages abound in jungle. There are hollows and excavations containing water hill overgetation and animal impurities, the Bysnah's bury their dead at a small depth in the compounds of their houses. See also pages 169 and	The conservancy cetablishment is altogether inadequent in fact there is only one mehter regularly employ. Surface cleansing is not therefore attended to, and the in on house seawening, the house-refuse being dispote by the people as convenient to them. There are public or private surface afarines, but there over well-privates, belonging to the well-to-do. They ouly cleaned when full, which takes years. See page 118 of this Report.	See pages 114 and 115 of this Report.
Water is taken from tanks which are used promisticuously, and are more or less polluted and often the supply is insufficient. Those of the tanks which are situaccidoutside the villages generally contain potable water. Where there are rivers their water is used, but the Bapuis and other low castes generally throw their partially burnt dead into them. See also pages 110 and 111 of this Report.	There are kutcha Is taken from the rivers. At times want of good motor the river. See water is much felt. See also page 118 of this Report.	Same as in Sautipore. See also page 116 of this Report,	Taken from rivers, tanks, and wells. There are 1,000 private and five public wells and three municipal and four private tanks. See also page 116 of this Report.	Water is taken from silted up tanks full of weeds, and is muddy; river water is also used, but the banks and beds thereof are fouled by defecation. Jute-siteping causes much impurity to water. See also pages 109 and 110 of this Report.	Is taken from wells, every house having them, and from a arter and excellent tank. There is a river also, but the tank water is preferred. See also page 118 of this Report.	See pages 114 and 115 of this Report
See pages 110 and 111 of this Report	The drainsge is defective. There are kutcha drains which dawharze into the riter. See also page 118 of this Report.	Same as in Santipore. See also page 116 of this Report.	The drainage is defective. There are main drains leading to the khals, and some of the roads have side drains, but the drains are encroached up on and obstructed. See also page 116 of this Report.	In some villages the drainage is obliterated by house-refuse. Some villages are low and water-losged, See also pages 103 and 110 of this Report.	There is no drainage. Only the roads are provided with culverts and water-ways. See also page 118 of this Peport.	See pages 114 and 115 of this Report
\$	20.2	F	F	8	G.	.19
6.71	81	2 2		76.S	90.9	7.32
9.80	66. 21	27 18	4.95	17.60	13.26	F6.F6
	:	 	<u> </u>	i	:	80.
471,48	. 777.8	17,726	8,683	16,732	6,731	65,954
Sautipore-Raral	Kushkes-Town	Kushtea—Rural	Banaghat—Town	Ranschat—Raral	Meherpore—Town	Meherpore-Rural
	•	:	1	:	:	:
Nuddes	Nuddes .	Nuddes	N nddes	Nuddæ	Nuddes	Naddes

District.	Name of Circle.	.noisal.	Pox.	DATIO OF DEATHS PER 1,000 OF POPULATION PROM- 1	PER PER PER PER PER PER PER PER PER PER	1 -mon-1	Drainage.	Water-supply.	Damestic cleansing.
Nuddes	Novodivapa. Toun	,108	lam8	ος βου βου βου βου βου βου βου βου βου βου	104U 8	nid 12	The drainage is very defective. The main road has been provided with side drains and the house drains are connected with them: but they have no outlets, and consequently much of the surface drainage collects in the hewws and extra thous about the town. Sec. Leo page 115 of this Report,	Is taken generally from the river and khals for drinking and cultnary purposes. The water of the former is good, but that of the latter is polluted chiefly by jute-steeping. See also page 11s of this Report.	Surface cleansing is attended to. There appears to by no permanent latrines for the townsprople, but temporary latrines are putt up for the pilgrims when they come in for the mela held here; the night-soil from which is removed to the fields and burded in piles 5 to 6 feet deep. Thore are no surface private private, but there are 450 yell-privies which are cleaned from time to time, and their confens burded new them in pila 85 to 10 feet deep with a layer of earth over it. The dead are cremated, but are also cast into the river.
Nuddes	Kumerkhali— <i>Kurol</i>	98.247	10	21.55	11.9		'se page 116 of this Report	Is taken from the rivers, bhils and tanks. The water of some of the tanks stinks owing to the dragging of nets through them by fishermen. See also yate. 116 of this Report.	ļ —
Nuddis,	Chagdah - Town		Data no	Data not available.	- -	-	See page 117 of this Report	See page 117 of this Beport	See page 117 of this Report,
Nuddes	Chegdah—Bara?	65.69	1	8.	- 07.1	<u></u>	The drainage is defective generally, but in some villages it is fair. Some of the villages are situated on high and some on low lauds, and the latter are consequently water-lowged. The roads and footpaths serve as drains. See also page 110 of this Beport,	Is taken from rivers, tanks, wells, bhilg, khals and ponds. Some of the tanks are durty, shallow, and full of rank regetation and juncle, Some have silted up and get dry, and their basks are used for dedecation, and hanches and ravigs of trees are put into them for falhing. The wells are generally good. The bhil water is good in some places, and much polluted in others. When they dry up their beds are dust for water. Some of the khals have ailted up. There are also hollows and excarations in which jute is largely steeped, and which are polluted in other ways, and still their water is used for all purposes, including drinking. See also page 110 of this Report.	Conservancy as usual, but in some places it is cared for the some extent. Many villages are full of trees and hembot opens. Retine and covolung are collected in heaps, chiefly by Mahomedans. Here and there ower dung is used for fuel. Defocation is carried on on footpaths, some rilages abound in rank vegeritien, juntle shritbs, stacesant water, holes and dirthes. Some are open and airy. The goverile business are very filthy. The dead are buried in compounds of house, and the pauper and infant dead are ast into the niver, and dead castile are thrower about. Jute is skeeped in water holes. See, also page 110 of this Report.
Nuddes	Jaguli—Barol	38,806	-	28.32	2.8.2		Special account is not yet available, but see gene	account is not yet available, but see general account on pages 101 to 104 and 109 of this Report.	ort,
Nuddes	., Chusdanga-Beral	818.	\$	\$8 \$8	210	16.1	Natural drainage is defective, and consequently surface water cannot be carried off quickly and lies starnant and scake into the soil about the houses. See also pages 101 to 104 and 109 of this Report.	Natural drainage is defective, and consequently Is taken from wells and tanks. Some difficulty is surface water cannot be carried off quickly left in summer, as then the fanks dry up. Till sand lies strainant and scales into the soll should like from their water-supply from them. The bouses. See also pages 101 to 104 and 109 bonks of rivers are used as latrines; the bhils of this Report, are contaminated by surface polition. See also pages 101 to 104 and 109 of this Report.	Conservancy absent. Household oleanliness, s not cared for. Lefereation in and about some villages is common. Cowdung is heaped up or kept in pits, emitting dissusting door a jute is steeped in hollows and tanks in the midst of habitations. In some villages dead bodies are buried in dwelling houses. See also pagig 101 to 104 and 109 of this Report.

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Same as in Santipore.	Same as in Santipore	Same as in Santipore	\$6	1.49	f0.12		68,184	Bhadulia—Rural
Same as in Santipore. See also pages 101 to 104 and 409 of this Report,	See also pages 101 Water is taken from the river and tanks. When the latter dryap, in s me villages, the river is resorted to. See also pages 101 to 104 and 105 of this Report.	The draminge is defective. See also pages 101 to 104 and 109 of this Report	1.60	2.19	76.76		61,929	Bhainka— <i>Bural</i>
keport.	ecount is not ret available, but for general account, see pages 101 to 104 and 109 of this Report.	Special account is not ret available, but for gen	\$3	3:30	25.52		136.713	Nowpara-Rural
	account is not yet available, for general account, see pages 101 to 104 and 109 of this Report.	Special account is not yet available, for general	3	£.9	28.82	1.	74,178	Dowlutpur—Rural
See page 115 of this Report.	See page 115 of this Report	See page 115 of this Report	8	3.14	20.63	29	74,955	Gaugni—Rural
See page 115 of this Report.	See page 115 of this Report	See page 115 of this Report	ន	3.25	8.33	66.	102,754	Kureempur—Rusal
See page 116 of this Report.	See page 116 of this Report	See page 116 of this Report	.12	99.3	19.03	:	89,160	Tehatia-Rural
See page 114 of this Report.	See page 114 of this Report	See page 11s of this Report	10.	1.43	18:19		54,192	Kaligunge - Rural
See page 114 of this Report.	See page 114 of this Report	See page 114 of this Report	£9.	1.02	89.03		59,762	Nakasipara – Rurol
Some of the villages are open and airy. Some rank vegetation, eattle litter and pits, hello containing sternati water. Accumulation and sweepings are to be seen in many. Jute water heles. The papers and infant dead into the river, and the dead cattle are ti where. See also page 113 of this Report.	Is taken from rivers, tanks, wells and bhils. River water is good, but branches and twigs are placed in it, in come places for fishing and moss and squarte p-ants cover it. Some of the tanks are shallow, See also page 113 of this Report.	In some villages the drainage is fair; in others bad, and starnation and water-locking occurs. See also page 113 of this Beport.	5	6-33	16.98		63,509	Chapra-Rurel
Some of the villages are open and free, but many are surrounded with jungle and bamboo clumps. In some rank vegetation and stagmant water holes abound. House sweepings, retries, &c., are accountated. Here and there cowdung is used for fuel. The Gowalls busts are very fifthy. The pauper dead are generally thrown into the river. See also pages 113 and 114 of this Report.	Is taken from rivers, tanks, wells, khals and bhils. Most of the tanks are shallow, silted up, covered with rank vegetation, and their bans are used for detecestion. Some dry up in the hot weather. The wells and this contain good water, some of the latter are polluted with weeds. Some of the khals have silted up. See also pages 113 and 114 of this Report.	Some of the villages are situated on hich and some on low land. See also pages 113 and 114 of this Report.	ŝ	 6.	17.82		107,28	Kishengunge – Rural
Some of the villages are on high groun with the surrounding ground; some the starnant bhils and surange. Conservationary. People recorf for defocation that away from habitations. The deathe compounds of houses. See also peand 169 of this Report.	Is taken from tanks, some of which are in bad condition, and from rivers. In some villages there are ponds which dry up in summer when wells are dug. See also pages 101 to 104 and 109 of this Report.	Natural drainage is defective, and consequently surface water cannot be, carried off sufficiently, and lies stagnant and scaks into the soil about the houses. Ese also pages 101 to 104 and 109 of this Report.	\$	9. 1- 9	17-60		45,340	Barakhali—Bural

3			RATIC OF F	OPULAT	BATIO OF DEATHS PER 1,000 OF POPULATION PROM-	1,000	SAVITARY B	SANITARY ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE READS OF	IDER THE HEADS OF -
District,	Name of Circle,	Population	Britali-poz.	Rozor.	Сројета,	-mos-fewosi adminiq	Dramage.	Water-supply,	Domestic cleansing.
Nuddes	Mamdanga – Zurež	89,947	,	% %	2.78	8.	Dranage of defective. The ditches here and there serve for drains, but they have no outfall and are defective in level. The ground is low. See also page 112 of this Report.	Is taken from canks, wells and bhils which are not well kept, and are subject to pollution of every kind, including human forces. This thans is very spanually provided with natural water-courses, the only provision of this nature being the river. Bhaluye. See also page 112 of this Report.	Surface cleansing is not attended to generally. The houses are filthy. Heaps of federing cattle-dung are to be met with in most villages. Defrection is carried on everywhere even in the midst of habitations. The waste grounds and ditches are full of garbage, bones of cattle and fifth of every description. See also page 112 of this Report.
Nuddes	Damurhuda – R# rol	63,014	\$5.	20.15	10.60	8	The drainase is bad. Water starnates and the soil is water-logged. See also page 111 of this Roport.	Water is taken from the river, tan's and bhils. There are also many dirty ponds and wells. Meny of the tanks are surrounded with juncle and contain rank vegetation, and their banks are polluted with animal impurities; the rivers receive surface washings; the bhils contain decaying vegetation, and it is the practice here to steep jute in water-reservoirs, the water of which is drank, See also page 111 of this Report.	Some of the villages are full of bamboo topes which perculus free perflation of art. Man, abound with rank vegetation, reture heaps, animal excreta, litter, dung, &c. Many hollows containing tool stageman water east. Defeccation is carried on op roads and footpaths, waste hands, banks of tanks, &c. Dead cattle are to be seen lying about. See also page 111 of this Report.
Naddes	Kalupole-Bural	39,596		25.25	:5 :5		The drainage is defective. The land is water logged and rain water does not dry for want of outfull. See also page 111 of this Roport.	Is taken from rivers, tanks and bhils. Some of the tanks dry up in the hot weather. The bhils are covered with weeds and vegetation, and branches and veges of trees are placed in them by fisher. In a Nome of them, however, contain good water. The rivers also are covered with a quintic plants and weeds. See also page 111 of this Report.	Many villages abound in rank vegetation and are surrounded by bauboo clumps. Heaps of cowdung and rectuse are to be met with. The goverile busis are particularly unclean. Hollows and pits, surrounded with overbaneing bamboos, in which jute is atcaped, said occidations decomposing cattle-dung and foul water, are numerous. In some villages the dead are buried in the compounds of houses. See also page 111 of this Report.
Nuddes	Jibunnsgore - Rural	40,120		17.99	1 290	'n	See page 112 of this Report	See page 112 of this Report	See page 112 of this Report.
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Jesore •	Kotwalli (Jesore) —Town.	8,465		18:77	76. 23	76.	The drainage is on the whole fair. Five main drains, and several smaller ones joined to them, drain the fown into the river Bhyruh.	Is taken from the river by those who live near it, and from tanks and wells by others. Six of the tanks have been reserved for drinking purposes, but tiey are not properly used. 20 of the wells	The conservancy arrangements are very unsatisfactory. Surface cleansing is not fully and properly attended to. The swecpings and rubbish are mostly thrown in corners and the backs of the houses. Some are used in

filling up excevations and low lands. The dung and refuse from the cittle sheds and stables are not properly dispected. These archite public lattines. The private privile strength is trenched but imperfectly, and the urine mixed with wastr is thrown on waste places. Promiscous defocation is very general. There are many foul water holes. The arrangements connected with interments are unsatifications. out they are un property asset. You saw with the have been similarly treated and protected from pollution. The river—Bhyrub—becomes covered with weeds and water plants and a stagnant pool din the cold season. The water of the private wells and tanks is extremely foul. The Buropeans and the better classes of matives, however, obtain which contains creellent drinking water. On the waker from the Jail, one of the tanks in dwhich contains creellent drinking water. On the kept in efficient working order. They are however obstructed here and there.

* For a general account of the Sanitary condition of the Villages in this District, see pages 101 to 109 of this Report.

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See pages 101 to 109 of this Report.	See pages 101 to 109 of this Report.	See pages 101 to 109 of this Report.	See pares 101 to 109 of this Report.	See pages 101 to 109 of this Report.	See pages 191 to 109 of this Report. In village Sidnryashs every house has a garden of fruit trees, chiefly coccount and arecanut. The roads are kept clean, and are provided with side-drains.	See pages 101 to 108 of this Report.	See pages 101 to 109 of this Report,	See pages 101 to 109 of this Report.	See pages 101 to 108 of this Report.	See pares 101 to 109 of this Report,	See pages 101 to 109 of this Report.	See pages 101 to 109 of this Revort.	See pages 101 to 109 of this Report.	See pages 101 to 109 of this Report.	See pages 101 to 109 of this Report.	See pages 101 to 11th of this Report.	See pages 101 to 169 of this Report.
:	:	:	:	:	:	1	:	•	:	:		•		•	:	See also pages 101	water.
	-		•		:						·			•		also pa	hils. The good eport.
See parces 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See papes 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	els taken from kha's and bhils. See it to 109 of this Report.	Is taken from the river, tanks and bhils. The bhils are large in some place and contain good water. See also pages 101 to 103 of this Report.
1	1	1	:	:	:		·	ī	ï	i	:	j	:		i	:	;
See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Beport	See pares 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 161 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	fSee pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report	See pares 101 to 109 of this Report	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report
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29.2	-25	\$1 20	717	9.8		2.92	ši	29.9	70.9	20.02	\$5.9	8.23	3-11	1.15	27.2	217	1.43
15.10	17.4	18.85	24.42	17.11	17-89	17-83	19.62	97.03	20.02	58.52	17.35	98.13	13.99	16.81	16.80	14.86	17.58
			1					1	1	\$	1		5.	1	100.	i	
158,889	85,450	102,627	44,638	159,162	151,862	£06'\$9	155,611	67,420	89,202	41,865	20,464	83,677	72,947	103,563	139,305	20,688	56,253
Kotwalli-Rural	Kesubpore- Raral	Jhenida—Rural	Kotchandpore-Rural	Magura - Barol	Narail—Burol	Bagarpara-Rural	Monirampore—Rural	Godkhali-Rural	Kaligunge-Rural "	Harinakunda-Raral	Shalkhia—Ragal	Mamudpore-Rural	Kalia-Rural	Lohagura-Raral	Sailkops-Rurol .	Bongong-Rural	Galehatta—Reral
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Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jessore	Jesore	- 10880 E	e89076	Jessore

			RAT 1.000 OF	TO OF DI	RATIO OF DEATHS PER 1,000 OF POPULATION FROM	1 NO.	SAMIARY B	SANTARY BSTIMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HEADS OF	EDER THE HEADS OF-
District.	Name of Circle.	opulation.	.xoq-flami	èver.	Sholers.	Bowel-com- plaints.	Drainage.	Water-supply.	Domestic cleanshir.
Jegore	Garripotha-Rural	61.053	8	13.30	89.9	-	See pages 101 to 109 of this Report Se	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report.
: :	Mohespore—Rural	112,137	300-	19:34	6.51	91.	See pages 101 to 109 of this Report Se	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report.
I		79,046		18.06	16.4	89	See pages 101 to 109 of this Report Is	Is taken from tanks. It is insufficient in quantity and bad in quality. See also pages 101 to 109 of this Report.	See pages 101 to 109 of this Report.
								e	
Kurhidebad	Bertampore - Pour	23, 6 05.	i	8	\$ \$	t	The drainage is defective. The main drains is have no proper levels, do not allow quick the passage of water, and keep the kwn under water when the bhils and rivers are in flood. Marry road-adid drains empty into tanks and hollows, and keep the neighbouring localities water-located. The house drainage is unsatisfactory. The compounds of many houses are below the level of the street drains.	is taken chieff from the Bhagiruthi river, wells and tanks. One of the tanks and three of the wells have been protected from pollution and reserved for div kirz purposes. The rest of the tanks are in bad condition. The wells are in fair order, but they are seidom resorted to for drinking water.	The conservancy arrangements are not quite satisfactory. Surface cleansing is fairly attended to, but fluid reduce is not properly disposed of. There are 1 public latrines, but they are insufficient. They and some of the private latrines are kept in good order by municipal mehters. The other private private prouple looking after. Promiseous aftereasing the effectation is very general. The night-soil is properly trenched. There are immunerable filthy pits and hollows full of rotting vegetation.
Murshidabad	Sujagunge - Eurol	8,345		93.13	*3	= =	See pages 101 to 104 and 118 and 119 of this Se Report.	ee pages 101 to 104 and 118 and 119 of this Report.	See pages 101 to 10s and 118 and 119 of this Report. See pages 101 to 10s and 118 and 119 of this Report.
Murshidabad	Gorabazar—Burol	12,633		02.62	55.	19.	See pages 101 to 104 and 118 and 119 of this Seport.	See pages 101 to 164 and 118 and 119 of this Report.	See pages 101 to 164 and 118 and 119 of this Report. See pages 161 to 164 and 118 and 119 of this Report.
Murehida bad	City Marshidabad	187 '88		8 21	8.13	\$6 .51	The drainage is defective. Some of the drains is aboly leveled and have not sufficient out. All. In many instances the drainage enters into tanks and hollows. House drainage is also unsatisfactory, the drains emptying into ceasings within or just outside of the premises.	is asken from the river Bhagriutti, tanks and wells, the one of the tanks and two of the wells have been rese. Ved for drinking purposes. The private tanks are in fair confiding, and arrangements exist for replenishing several of them with river water. The private wells are more or less protected from pollution, but they are chiefly used for washing purposes.	The conse, vancy arrangements are mostly good. Sur- face cleaning is properly attended to, and the fluid house and kitchen retails id disposed of in the tremching frounds. There are 18 bubble lakines kept in good order. The private privica are mostly well constructed and properly attended to by their owners. Promisen on elefercation is, however, still practiced. The night- on elefercation is, however, still practiced. The night- on elefercation is, however, still practiced. The night- on left and been farmed for cultivation. There are numerous pits and hollows all over the town. The arrangements ownested with the disposal of the dead are not satisfactory.
Murshidabad	Shaharagar—Rural	9,523	į	25 Ec	ë		See page 120 of this Report See	See psee 120 of this Report	See page 120 of this Report.
	A Dame?	11 117	_	24.98	88	8	See pages 119 and 120 of this Report B	See pages 119 and 120 of this Report	See pages 119 and 120 of this Report.
Horshidabad	Assenpur-serrat	11,11		3	-	3	1	011	of this Benom

· For a general account of the Sanitary condition of the Villages in this District, see pages 101 to 104 and 118 and 119 of this Report.

Murshidabad Kandi-Tows Murshidabad Jangipur-Tows Murshidabad Jangipur-Tows Murshidabad Dewanserai-Rard Murshidabad Barwa-Rard Murshidabad Goss-Rard Murshidabad Jelhinghi-Rard Murshidabad Jelhinghi-Rard Murshidabad Jelhinghi-Rard Murshidabad Jelhinghi-Rard	79,639	-		_			
	79,659	•	18.33	1.88	- 8	Information is not yet available.	•
	10,187	1	16.43	12 is	5.	See pages 101 to 104 and 118 and 119 of this See pages 101 to 104 and 118 and 119 of this Report.	ort. See pages 101 to 104 and 118 and 119 of this Report.
		1	99.51	25.23	7.85	Information is not yet available.	
	27,269	10.	06.41	\$	9.	See page 121 of this Report See page 121 of this Report	See page 121 of this Report.
	980'99		19.88	蠡	<u>152</u>	See pages 121 and 122 of this Report See pages 121 and 122 of this Report	See pares 121 and 123 of this Report.
1 1 1	67,912		18-91	es es	- F	See pages 101 to 104 and 118 and 119 of this See pages 101 to 104 and 118 and 119 of this Rep.rt.	.rt. See pages 101 to 104 and 118 and 119 of this Report.
1 1 1	106,025		15.41	12.5	40.	See page 122 of this Report See page 122 of this Report	See 1246e 123 of this Report.
1 1	78,423		18.06	33	충	See pages 120 and 121 of this Report See pages 130 and 121 of this Report	Abounds in dense jungle. Also see pages 130 and 121 of this Report.
	108,508		21.88	P.	\$	See pages 101 to 104 and 118 and 119 of this See pages 101 to 104 and 118 and 119 of this Report. Report.	
1	39,568		23.57	**	15	See pare 130 of this Report See pare 120 of this Report	See page 190 of this Report.
	57,135	i	16:33	28 63	\$	See pares 101 to 104 and 118 and 119 of this See pages 101 to 104 and 118 and 119aof this Report.	
Murphidaced Noweds-Earel	47,559	1	17.88	4.10	ដ	See pages 101 to 104 and 118 and 119 of this See pages 101 to 104 and 118 and 119 of this Report. Report.	port. See pages 101 to 104 and 118 and 119 of this Report.
Washidahad Gokum-Baral	42,446		15.07	138	**	See page 123 of this Report See page 123 of this Report	See page 123 of this Report.
Kaliangunge-Ruon	37,206		29.41	174	ន្ត	See page 121 of this Report	See page 121 of this Seport.
• :	27,559		18.62	88	11.	See pages 101 to 104 and 118 and 119 of this Report.	and 119 of this Beport.
Murshidabad Bhagwangola-Earal	67,238	\$	21.57	1.08	£1.	.13 See page 119 of this Report See page 119 of this Report	Abounds in dense jungle. See also page 119 of this Report.

			RATIO OF P	RATIO OF DRATHS PER 1,000 OF POPULATION PROM-	THE PER ON PROM	1,000	SANTIARY BSILI	SANITARY ESTIMATE OF THE VILLAGES IN RACH CIRCLE URDER THE HEADS OF-	R THE HEADS OF-
District.	Name of Circle.	Population.	Small-pox.	Fover.	Cholera.	Bowel-com- plaints.	Drainage.	Water-supply.	Domestic cleansing.
Murshidabad	Shamshergunj — Kural	88,536	11.	18.20	37	ક	See pages 101 to 104 and 119 and 119 of this Report.	See pages 101 to 104 and 119 and 119 of this Report.	See pages 101 to 104 and 118 and 119 of this Report.
Murshidabad	Suti-Rural	98,556	F	15.26	55	È	See page 122 of this Report S	See page 122 of this Report	See page 123 of this Report.
Murshidabad	Mirapur-Bural	961,434		14.30	ş	ŝ	See pages 101 to 104 and 118 and 115 of this Seport.	See pages 101 to 104 and 119 and 119 of this Report.	See pages 101 to 104 and 118 and 119 of this Report.
Murshidabad	Khargram—Rural	54,018		13-03	1.86	÷	800 page 122 of this Report	See page 122 of this Report	See page 122 of this Report.
Kbulna•	Khulns-Town	6,178		96.41	88-7		The drainage is fairly good. There are three I outfall drains which discharge into the bhil, and most of the road-side drains lead into the ferance. But another outfall drain a required, ferance. But another outfall drain a required, ferance, may be compounds and the ground generally are citt up into ditches and ponds where waker lodges and stagnates, and this process is going on without check.	Is taken from the river and in places distant from the river from the river water is tolerably good, excer during the rains, when it is polluted by the overlowed efsament bills. The faulte are miserably bad. Much of the water required for cullicary and domestic purposes is drawn from weedy ponds and shallow ditches, even by those who reside near the river.	The conservancy strangements are deplorably bad. Surface cleansing is very much neglected. There are no public latrines. Deforcation is carried on everywhere, and the forcal matter into the ditches and tanks used for domestic purposes. The private private are miscrably constructed, the forcal matter, urine, and washings falling on the ground sad pollating it and the river. The night-soil is thus not burred, but is simply covered with a little earth at a spot within five on at feet of the place where it fallial internent in house compounds is general. Dead bodies are thrown into the river, and the pauper and contagious discase deed are not cared for. The private market is ill-kept, has bad drainage and no atrine.
Khulns	Khulna-Esral	121,212		16.31	94 33	17.	See pages 101 to 109 of this Report	Taken from rivers, tanks, and choked up ponds. See also pages 101 to 109 of this Report.	Bamboo topes and trees around houses are common. In some rillages the jungle is so dense that it is dark in the day time, and harbours wild boars and leopards. Eash vesteation abounds. See also pages 101 to 109 of this Report.
Khulna	Saikhira—Tosen	8,738	\$1	18-93	8		There is no regular system of drainage. The road-aide drams, excepting these recently made are not efficient, being deficient in levels and obstructed.	Is taken from tanks which are used for all purposes and being excavased in water-logged soil cannot be good. A khal, the water of which is simply flithy, is also resorted to.	Surface cleansing is very partial and imperfect, and the sweepings are thrown on the banks of a waker-course which is fast silting up. There are no public latrines, and the private ones are few in number, and cleaned only occasionally. The night-soil is thrown or some distant field. "Defectation is carried on in jungles, parties and other waste places. Inferment takes place in the compound of houses, and dead bodies are thrown into the khal. The pauper dead are disposed of by the Municipality.
Khains	Satkhira—Bural	87,876		17.38	8.1	12	There are no drains. See also pages 101 to 109 of this Beport.	is taken from tanks, the water of which is muddy. See also pages 101 to 109 of this Report,	Surface cleansing is not attended to. Conservancy nil. People defocate rverywhere, Jungle abounds. The dead are interred in and near houses. See also pages 101 to 109 of this Report.
	-	For a gen	teral ac	sount o	of the B	anitary	* For a general account of the Sanitary condition of the villages in this District, see pages 101 to 109 of this Beport.	ct, see pages 101 to 109 of this Beport.	

Khulpa	Dumria and Talla— Earul.	169,020	66.	20-58	1.83	19	See pages 101 to 108 of this Report	See pages 101 to 108 of this Report	See pages 101 to 108 of this Report.
Khulna	Bitachatta—Rerol	37,501	i	16.87	4.55	8 8	See pages 101 to 108 of this Report See	See pages 101 to 108 of this Report	See pages 101 to 108 of this Beport,
Khuina	Paikgatcha-Rural	70,478		17.26	1.36	150	See pages 101 to 108 of this Report S	See pages 101 to 108 of this Report	See pages 101 to 108 of this Report,
Khulns	Bagerlat - Eural	137,818	i	87.12	1.29	70	There are no drains. See also pages 101 to [15] 108 of this Report.	Is taken from rivers, khals, and tanks. In Ramilohoppur there is one large tank containing scod water, but its embanknent is covered with vecetation. Choked up ponds are also commonly used. In some places the river water becomes brackish in summer. See also pages 101 to 169 of this Report.	The floors of the house are damp, and they are, in places, surrounded with juncle and aregant and other palms. Surface cleansing, conservancy, &c., nil. The dead are buried within homestcade. See also pages 101 so 109 of this Report.
Khdlns	Molahat-Raral	50,478	1	11:58	1.78	12.	See pages 101 to 109 of this Report S	See pages 191 to 109 of this Report	See pages 101 to 109 of this Report.
Khulna	Rampsl-Eural	49,827		18.68	1.10	1.54	See pages 101 to 109 of this Report S	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report.
Khuha	Morellgunge—Bural	62,670	1	13.48	-55	- g.	See pages 101 to 109 of this Report S	See pages 101 to 109 of this Report	See pages 101 to 109 of this Report.
Khulna	Kalarocs—Bura!	81,395		87.11	2.13	ŝt.	There are no drains. See also pages 101 I to 1:0 of this Report.	Is taken from the river, except in summer when the water is stangant and obnorious, and then other receptacles, however politised, are resorted to. See also pages 101 to 109 of this Report.	Bamboo jungle exists. Conservancy nil. The dead are buried in homesteads, and in some places cast into the river. See also pages 101 to 109 of this keport.
Khulna	Magum—Bural	£8,913	÷	30.90		5	There are no drains. Hollows and excava- it tions are common. See also pages 101 to 109 of this Report.	Is taken from the river and tanks. The latter are shallow and covered with weeds and dry up in the bot weather. See also pages 101 to 109 of this keport.	Surface cleansing is not observed. Conservancy rail. Thick juncle abounds. There are many hollows and excavations containing dried leaves and stagmant water. In some places the dead are cast into the river. See also pages 161 to 109 of this Report.
Khulm		62,412	ē	15.76	È	7	There are no drains. See also pages 101 to 109 I	Is taken from shallow tanks and rivers. The tanks are full of weeds and their water is rarely good. Fresh water is scaree in some places. See also pages 101 to 109 of this Report.	The houses have low floors in some places. Bamboo jungle shounds in some villages. Conservancy arrangements are absent. Defeccation is carried on on river banks and everywhere. Interments take places is and near houses. See also pages 101 to 109 of this Report.
Khulna	Kaligange—Rural	146,130		15-22	1.53	£1.	See pages 101 to 109 of this Report	Is taken mostly from cuttings or shallow ponds full of weeds. There are hardly any good tanks. See also pages 101 to 109 of this Report.	The houses are badly constructed, damp and devoid of renjilation. Sectalso pages 102 to 109 of this Report.
	-			-	-	~			
Dinajpur	Dipajpur—Tokes	12,560		14.57	Ŀ	06.	The exicting drainage is not satisfactory. If here are nonces and knicha drains which are not kept clean and their action is unifficient. They are deep, and faulty in onlicing. There are numerous pits and hollows calich are not drained. But a good drainage scheme has been sanctioned and will be soon taken in hand.	Is taken from the rivers Geara and Purnoblaba, tanks and wells. Two of the tanks and 19 of the wells have been reserved for dunking purpose, but the ground around the latter his not been sloned to prevent scakare and inward drainage. There are munerus private tanks, but they are in bad condition. In the hot westler they are up and are little better than filthy puddles. The wells are then resorted to as they afford a continuous supply of water. The banks of the rivers are fouled.	Surface cleansing is fairly attended to. The sweepings are generally removed outside the Municipality. A portion of the perivate price is under minoidial management. The rest are in bad condition. There are II public latrines in good order. The night-soil from these as well as the private privite is removed outside the town and buried. Prumisations deficiention has been checked to a great extent. Foul water holes and excessations exist.

			RATIO OF DEATHS PRE 1,000	DEATE	ES PER	000,	SANITARY BETIMATE OF THE VILLAGES IN BACE CIRCLE UNDER THE HEADS OF-	R THE HEADS OF—	A pı
District.	Name of Circle.	Population.	y .roq-liamB	Fever, T	Cholera.	Rowel-com- plaints.	Drainage. Water-supply.	Domestic cloansing.	p. VI .]
Dinajpur	Dinajpur-Rural	169,896	80.	23.18	3	0f.	Particulars regarding this thans are not yet available.		•
Dinajpur	Bengunge-Raral	139,891	ģ	27.34	11.	F	Particulars regarding this thans are not yet available.		
Dinajpur 1	Thakureson-Beral	290,397	10.	\$1.88	27.	81.	Partivalars regarding this thans are not yet available.	,	
Dinajpur	Ranisonkoil—Eural	75,108	i	89.53	7.7		See page 134 of this Baport See page 134 of this Report See p	See page 134 of this Report.	٠.
Dinsjpar	Peergunge-Bural	088'88	<u>è</u>	39.15	9.	\$	diculars regarding this thans are not yet available.		
Dinsjpur	Hemtabad Rural	86,287		86.61	ä	=	threftenlars regarding this thans are not yet available.		
Dinajpur	Nawabgungs-Rural	61,637	1	37.0g	16.	ş	Particulars regarding this thans are not yet available.		
Dinajpus	Kaligungs-Eural	\$86°#5	I	17:30	ŝ	.15	Particulars regarding this thans are not yet available.		,
Dinajpar	Banshiharee - Bural	118,18	ş	88.43	-11	ő.	Particulars regarding this thans are not yet available.		GAV.
Dinajpur	Patnitollah—Berra!	827,09	i	98.13		P	See page 134 of this Report See page 134 of this Report	See page 134 of this Report.	
Dinajpur	Mohadeopore - Esrai	67,266	į	17.38	7.	10	Particulars regarding this thans are not yet available.	•	1
Dirajpur	Parsha Rarat	98,586		19.03	1	\$	See page 134 of this Report See page 134 of this Beport	See page 134 of this Report.	1
Dinajput	Patiram—Burel	78,081	i	38.8 8	*8	ģi	See page 134 of this Report See page 134 of this Report	See page 124 of this Report.	1
Dinajpur	Gangaranporo-Rerei	74,491	ŝ	23	3		os Particulars regarding this thans are not yet available.	,	. 1.
Dinsipar	Chintenon—Reret	880.58	5	67.73	**	-18	Rarticulars regarding this thans are not yet available.		1.
Dinajper	Parbattipore—Reral	66,708	!	22	SI.		Particulars regarding this that are not yet available.		1

,		•	· c	xix				٠.	[App	VI.	. ,
Surface cleansing is not properly attended to. The sweep intra, &c., are employed in filing up hollows and read-side drains, but much of them lie unremoved. The book man but within the premises or into the public drains. There are only three public latrines. They are kept in a fifth condition, and more of them are required. There are about 10s private privies. Many of them are situated near disches, drains, &c., and those of them which are under the filthy. The right-soil from the public latrines and from those private ones which are under the filthy. The right-soil from the public latrines and from those private ones which are under manifolded control is buried in deep trenches, but that from the rest are throwh into the juncie or any convenient place. Deficiello is carried on one he fields and read-sides and in drains. Cattle are kept within the enclosures of homse, and their sheds are in numerable fifthy pits, tanks, and water-holes.	See page 135 of this Report.	See page 135 of this Report.	The houses, although situated on raised flours, look damp. No conservancy. Defencation is carried on on the fields. The dead are buried in the compounds in the houses. See also page 135 of this Report.	See page 135 of this Report.	The houses are dry. See also page 135 of this Report.	See page 135 of this Beport.	The houses are dry, their floors being raised. See also page 135 of this Report.	See page 135 of this Report.	The houses are not crowded torether and theirsentition is free. They and their compounds are kept clean, the rubbish being deposited outside. Conservancy nil. Deforation is carried on on the floids. The deed are interred in the compounds of the houses. See also page 136 of this Report.	See page 135 of this Report.	
Is taken from the river Pudma and from two tanks reserved for drinking and culinary purposes. There are many other tauks, but the water in the majority of them is unfit for any other use than the washing of utensils, &c. The river water is considered good.	See page 138-of this Report	See page 135 of this Report	Is taken from wells. Some villages get it from the silted up river Danja. See also page 135 of this Report.	See page 135 of this Report	Is taken from tanks and wells. The banks of the former are raised and the water pretty clean. In some villages the river Jamuna is resorted to, the water of which is politiced by fishermen placing branches of trees in it to catch fish. See also page 135 of this Report.	See page 135 of this Report	Is taken from tanks and the river where one exists. See also page 136 of this keport,	See page 135 of this Report	also page 135 of is taken from the rivers. See also page 135 of this Report.	See page 135 of this Report	
The drainage is unsatisfactory. The fall is good, but the drains are kutchs and difficult to keep in order. The refuse water from those house drains which are connected with the public drains stagmates in the former.	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	Drainage is defective. See also page 135 of this Report.	See page 135 of this Report	
80 F. C.	49.	16	89	ş	10	ş	\$	ŝ	!	80	
<u>8</u>	ģ	ş	1.96	8	10.1	æ	\$5	1 58	2	É	
4.8	88.48	28-93	25.22	15-23	13.62	81.13	27-42	37.5 8	15.28 28	25-37	
Š		Þ	13	::	i		::	10.		800.	
19,791	81,096	163,662	84,963	121,581	0±8,28	101,308	121,238	112,607	121,564	194,160	
(Beankah—Town	Beauleah-Rural	Nattore-Rural	Lalpere or Bilmara	Begmarn—Rural	Nougaon—Raral	Mandar—Burai	Putis—Rural	Singra—Bural	Borigram – Euros	Charghat—Bural	
Rajsbahye	Rajshabye	Rajshahye	Rajshahys	Bajshahye	Rajsbahye	Rajsbahye	Rajabahye	Rajshahye	Rajsbahye	Rajshabye	

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p. V	Domestic chansing.	See page 135 of this Report.	_,	of this Report.	See page 133 of this Report.		The conservancy arrangements are adequate establishment. House solid and liquid—is thrown into the hollow or excavation. There she is extremely bad. There harrines and they are unprovided latrines and they are unprovided latrines, excepting those where the foces and untries, excepting those where the foces and untries and are consected latrines and are consecuted. A few well-prives still exist dition. A few well-prives still exist the public latrines and from those under municipal control is trenefful that from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid from the rest, composing the fluid and hollows. The arrangement the disposal of the dead are unsating	The floors of the houses are leeped, but they are damp in many vilages and so the people steep on mandans, in many vilages and so the people steep on mandans, in many vilages and so many in the four in the Ruibish is thrown near houses. The fless and the this fine that is thrown near houses, are fields and the fire fless, or in houses, and dead tattle free and are buried near, or in houses, and dead tattle are left near; them. See also are left to this keport.	See page 135 of this Report.	See page 135 of this Report.
SANITARY BESTIMATE OF THE VILLAGES IN EACH CIRCLE COLUMN	Water-supply.	See nare 135 of this Report		Is taken from wells and river. See also page 135 of this Report.	See page 136 of this Report		chiefy taken from wells of which every use a pucca or kutcha one, mestly the hose well-a which are properted to do were. But the cultion of the rest and then vater foul, There are some wells pro-eted and reserved for drinking wells pro-eted and reserved for drinking own is not suited for tanks, but the soil own is not suited for tanks.	Is the from Wells and tanks. Their water is said to be great. But bathing and washing an earried on around the former and refuse is thrown into, and defection takes place on the banks of, the latter. See also page 135 of this Report.	See page 135 of this Report	See page 135 of this Report
SANITARY BEIT	Drainage.	1	See page 135 of this neport	See page 135 of this Report	See page 155 of this Report		The drainage, although considerably improved, Is, still devective. The fall of the main channel is insufficient for the quick passage of water. The levels of the subschary drains as anity and are obstructed at places. The swater-ways are inefficient.	See page 135 of this Beport	See page 185 of this Report	See page 135 of this Repo
TR 1,000	lowel-com- plaints.	EI	=	95		_	8.	8.5	1.82	13
RATIO OF DEATHS PER 1,000 OF POPULATION PROM-	polera.	၁ 	چ 	151 121	- F	_	e	S. 34	10.63	78.92
rie or D	GAGE.		18.28	1471	8	-1	- 		- j.	
	.neilalugo xoq-lism	- -	43,799	79,451		mo'co	13,320	116,210	165.667.	216,213
	Name of Circle,	- G	Godsgari-Bural 4	Panchupore-Rural	-	Tancre-Euras	Rungere, of Mahremense-Tour.	Mahigunge – Rural	Kalipange or Phurub-	Tilinance—Raral
	District.	•	Rajshahye	Rajsbahyc		Rajsnabye	Rangrore	- Rungpore	Bungpore	

Rangpore	Sadulapore—Raral	112,563	800.	28-08	8.	80	Urannake is undustring wing to dead rivers. See also page 135 of this Report.	e pares 134 and	near them, and jungle abounds in them. The dead are buried within the houses, and dead cettle lie about. See also pages 134 and 135 of this Report.
Bangpore	Darwani-Rural	145,390	ış.	7 8.98	19	F0.	See page 135 of this Report Is	Is taken from the river and wells—both sources In are pollured in the usual manner. Tanks also exist, but they are polluted by deforation on a their banks. See also page 135 of this keport.	The houses are sweet and leeped, but the sweepings and retuse are thrown about them. The pathways are fithy. Conservancy is absent. Burishs take also page 135 of this Report.
Bunepore	Nesbutgunge – Lura!	124,567	:	10.43	æ	8	Some of the villages are built on high ground. It See also page 136 of this Report.	If taken from ganlow wells and the river which is life also shallow in some places. Bathing and washing are carried out near the wells. See also page 138 of this Report.	In next villages the floor are leeped, but are damp and straw is therefore used for bedding. The rubbish is thrown near houses. Conservancy nil. The fields are resorted to for defection. Corpses and carcasses are hursed near houses; in some villages within them. So also page 135 of this Report.
•		200		81.13	71.1	17	See page 135 of this Report	See page 135 of this Beport	See page 35 of this Report.
Rungpore	Jaldhacca - Bural	163,672		\$6.56 \$6.90	_ _	7.	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report.
Rungpore .	Dimla—Bural	138,762		_	_ _	6.	See page 135 of this Report	Sec page 135 of this Report	See page 135 of this Report.
Rungpore Rungpore	Barshari—Rura! Kawrgunge—Bara!	88,619	5		_		Very many villages are situated on low ground. Is taken from kutcha wells and tanks. See also page 135 of this Report.	See also	Some of the houses are damp, ill-rentilated and crowded together. Beines and rubbish abound near houses, Deforation is carried on near pathways, and dead cattle lie about mear houses. See also page 135 of this Report.
Rungpore	Nageswari-Rural	177.229		27.94	33	• 83	Generally the villagess are situated on higher ground than usual. See also page 135 of this Report.	Is taken from wells. Bathing and washing are carried on near them said in some places they carried to by two many people, so that the water gets muddy. See also page 135 of this keport.	In some villages hamboo clamps and trees impede ventilation and the houses are drowded with immates at night. Conservancy is absent. The fields are recorded into fa defectation. The fockpaths and house surround into are fifthy. The dead are buried near bouses and deadeautile are thrown anywhere. See also page 135 of this Report.
Kungpore	Hitspuker or Ma- langor-Eural,	. 80,033	!	99.12			Many of the villages are situated on pretty high ground. See also page 135 of this Report.	is taken from rivers and wells. The water of both is said to be good, but bathing and washing are carried on around the latter. See also page 135 of this Report.	The house floors are swept, but are damp, and so machans are used for sleeping. Treir surroundings are filthy. The dead are buried near houses and dead cattle lie about. See also page 135 of this heport.
Rungpore	Pirgunge-Bural	590'68	1	94.08	- F	\$. See page 135 of this Report	As abore. See also page 135 of this Report	Conservancy is absent. The house surroundings are filliby from refuse, drupt, ashes, &c. The fields are resorted to for deforation. The dead are buried, near houses, and dead cuttle are thrown snywhere. See also page 135 of this Report.

DER THE HEADS OF-	Domentic cleansing.	See page 138 of this Report.	See page 135 of this Report.	The houses are dry. In some places jungle and ma groves abound. Conservancy mi. The footpaths house surroundings are fithly. The fields are reso to for deforation. Generally the dead are buried; house, or in the compounds near the elesping re or even within the house, or thrown into the riber cities also thrown anywhere. See also page of this Report.	The horse refuse—solid and fluid—generally lies in pits and about the houses, little being deposited ontaide for removal by the conservancy carris. For want of carris, it is needed to the trees are general. We have the public little, 20. The mitting a most oftensive areal. There is only one public latrine where they exactle. Wight-soil is the none convenient hollow of jungle. Fromiscous of defocation is carried on to a great extent. The conservance of the cattle-shocks is most flith. The conservance. The house are mostly well scattered and not eroweled. In heaps, festering in the compounds of house are mostly well scattered and not eroweled. In heaps, festering in the compounds of house, and cattle dung lies and water holes about the town. The house are mostly well scattered and not eroweled. In heaps, festering in the compounds of house, and cattle dung lies heaps. The propie work in the powner and on the latest healtheir bodies being immerted in which jute has the other half exposed to the horminities. The dead has buried in, the compounds of houses and on the over the places used as buried fractions, over even	See page 135 of this Report,
SABITARY BETIMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HEADS OF-	Water-supply.	See page 125 of this Report	See page 135 of this Report	Is taken from rivers, tanks, wells. All the sources are politized from the usual causes. Water in which jute has been specified in here and there drank. See also page 185 of this Report.	taken from the river Korotra and from tan and tutchs wells. The last cannot but be ocannised by the numerous well-privies in collused by the numerous well-privies in soluted by dropping leaves from over-hands polluted by dropping leaves from over-hands or the first said. The river receives theirs of the kown, and its water is much unting the rains, and in the hot weather becomes starnant. Only one and and the becomes starnant only one seek and its wells have been proceeded and reserved solely if frinking purposes. The water-supply is deficiently in many villages, rotting jute, and at wortain, in many villages, rotting jute, and at which was even is drawf. The water of the said on is also drank. See also page 156 of the Report.	See page 135 of this Report
SABITARY I	Drainage.	See page 135 of this Report	See page 135 of this Report	The natural drainage in some places is good, being the ground is low, but the soil being sandy water is quickly absorbed. See also page 135 of this Report.	Drainage is defective. Most of the drains are defective in level; constructed without system; and empty; into the river. They are defective in level; constructed without image; and blocked with rubbish and image; and blocked with rubbish and image; and of the rubbish and see piece of land in the west which becomes a swamp during the rains and retains water several months, causing dampness and consequent fever and dysentery. The country is low, and during the rains surrounded by water. There is no drainage. See also pare 135 of this Report.	See page 135 of this Report
ROX-	Bowel com-	S	.16	F	.0.8 80.	32
RATIO OF DEATHS PRE 1,000 OF POPULATION IRON	Cholera.	12.92	98.9	95.59	2 2 2	क
TO OF D	Pover,	21.85	94.65 65	24.01	15.10	88 -79
RAT 1,000 o	.xoq-llamB		1	500.	i	•
	Population.	57,808	91,469	189.027	103,238	47,463
	Name of Circle.	Bhawanicunge—Rurol	Sundergunge Rara!	Govindgunge – Raral	Bogra – Town Sheriakandi – Beral Sogange	Sherpore—Baral
	4	•!	:	:	:	
	District.	Rungpore	Rungpore	Виперого	Bogra.	Bogra

, , , ,		and new reader; of this			exxii			i v
See page 135 of this Report.	See page 135 of this Report.	The houses are mostly ginated on high land, and are precty dry and fairly ventilated. No conservancy; people case themselves on fields. See page 136 of this Report.	See page 185 of this Report.	See page 135 of this Report.	The conservancy arrangements are defective. The streets of the gunge only are avents, the sweetings being thrown into an exercation. The hones refuse is there into ditches. Public istrines have been provided from the privise daily and trenched, but the liquid sewage is allowed to souk into the greening or a song mulated in pits. The dead are generally buried in the compound of houses, and somestimes within these Stopic have, however, been taken to stop this objection above the practice by providing public burial-grounds. The market is undrained and in a had condition.	See page 135 of this Report.	Surface cleausing is attended to, the speepings being used to fill up excavation, but much of these remain up. The surface if there is only one public latting to the propision are compelled to resort to the fidelia adjacents to their maniers. Only a portion of the private paries are unsign maniers. In the properties of the public maniers and the public maniers are to disposal of the dead are ussessing account.	See page 135 of this Report,
See page 135 of this Report	See page 135 of this Report	Is taken from wells and rivers. The rivers Najore and Korotoya, have silted up, and most of the wells dry up during summer. See also page 135 of this Report.	See page 135 of this Report	See page 135 of this Report	Is taken from 32 public wells (seven puces) and 3,000 private ones, and yet during eight months of the year river water is also used. The river was shallow and its water dirty, but since the mouth of the Kata khal was excavated good water is obtainable.	See page 136 of this Report	taken from tanks, the river Ichamutti, an wells. The tanks are defiled in many ways; The relations are defiled in many ways; The relations are defiled in the sow was the many wells in the town are kutcha, except many wells in the town are kutcha, except many wells in the town are kutcha, except many wells in the kutchery and four wells recently contacted. The water of the kutchar wells contaily inhure. The kutchery well and it con public wells, which are now m not recorted to my public wells, which are now m on the recorted from polation, good prishells waster; to hisee wells are insufficient to meet the wants che people. Some of the well-to-do people obtained water and the description of the description of the wants in the deapers, in carts. As the Ichamutti is failting up, water difficulty is apprehended.	See page 135 of this Report
See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	See page 135 of this Report	The natural drainage is good. The water freely recedes with the subsidiation of the river, ercept from the pits and encarations and it is said that it has therefore not been found necessary to supply the streets and houses with drains.	See page 135 of this Beport	The drainage is primitive and very defective. Is Excepting the bear drains, all the rest of Excepting the bear drains, all the rest of the numerous drains in this town are kutcha and deep. Most of them dischares into tanks. Some of them are obstructed, and the procedurants are built over. During heavy floods the water lies in the drains, and the deposited silt destroys their levels.	See page 136 of this Report
1	\$		\$	\$	1.56	*	**	7
	F	81.1	- -	1.58	\$ 1.3	84.	\$5 - 03	200
24.23	25.23	18:33	- 3 3	22 50 50	88.	87.98	19.72	25.62
-		-	_		- I	- -		
467,734	89,374	453,49	40,023	61,033	21,037	198,148	16,987	174,381
Panchbibi - Rerol	Nowabganj-Raral		Khetlal-Rural		Serajkungo—Toom	Seriguego - Ryral	Pubna – Totor	Pubma-Eurol
- 1		ţ»	-	1		i i	i	1
		Bogn		Bogra	Pubus	Poles	Pubna	Pabas

* The Magistrate notes that in sanitary conditions obtain throughout this district, such as contaminated and, often, foul-water-supply accumulations of filth and refuse near the houses, buriel of the dead at an insufficient depth, and abundant rotting vegetation found in water, which pollutes the atmosphere.

	-		RATIO (OF DEAT	RATIO OF DEATHS PER 1,000	- 600,1	Sixiiaey esti	SANILARY ESTIMIE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	IB HEADS OF—
District.	Name of Girele.	-taothaltado	Zod-lisut	Pevor.	.erolodi Si	Bowel-com- plaints.	Drainage.	Water-supply.	Domestic cleansing,
Pubns	Doolsa-Rural	186,363	3 1	76.38	76.1	<u>.</u>	See page 133 of this Report See	See page 135 of, tl., 3 Report See	See page 135 of this Report.
:	72	133,467		22 23	21 22 	7.7	See page 135 of this Report Se	See page 135 of this Report See	See page 135 of this Report,
	Mathura-Bural	162,4%	6Au.	12.62	19.6	r.	See page 135 of this Report Se	See page 135 of this Rep rt Se	Seepsgr 135 of this Beport,
r nbus	Shazadpore-Rural	##*9 t		35.53	1.30	7.	See page 135 of this Report Se	See page 136 of this Report Se	See page 135 of this Report,
Pubna	Ullapara-Rural	n.'LI	1	22.68	₹8	1.5	in the 135 of this Report is	See page 135 of this Report	See page 135 of this Report,
-		92.37	1	92.62	ş	ģ	135 of this Report	See page 135 of this Report Se	See page 135 of this Report,
arjiling	Darjiling – Toun	9.64.		19. 2	. \$5	10.9	The drait are is very good. Most of the outlets are in good order, and the remaining few are being improved. The house drains are generally connected with the street drains; but the joints of the worden drains in the bazar and of those between houses have not been property put together.	This town possesses an excellent water-supply obtained through pipes from the spruses in Senchal, and the supply is seine extended where wanting. But betining platforms and tanks for dhobis are insufficient.	The conservancy arrangements are satisfactory. Surface cleansing and the removal of full refuse from houses are well attended to. There are 18 public lightines for males and one for females, which are in good condition. But more of these conveniences are required as well as public urinals. Most of the private privise, of which there are many, are well constructed and kent in an inoffensive condition by municipal menkers; but promuserous electronis is trenched, but in rather deep structher. The arrangements for the disposal of the deed are satisfactory, but those relating to markets and alaughter-houses call for more attention.
Darjiling	Darjilnş—Burai	45,300	F -	11.83		8.25	No special information is net yet available; but see page 134 of this K-port.	Is taken from joras (hill streams) which are apt to be polluted; but in some places the best of them have been selected for drinking. See also page 134 of this Report.	No conservancy arrangements exist; all rubbish, £c., are thrown down the khads. The roads are clean. In some places buffaloes are sleughtered on the high-way, and the reasans are left there, or thrown down hill. See also page 134 of this Report.
Darjiing	Phashidewah - Rural	68,241	- 25	19.68	-	1.86	No special account is yet available for this thans.		
Darjiling	Kurseong—Town	Data not available.	available	. ;	. :	. :	The dramage arrangements are good. The street and house drains are kept in good order. No encroachments on, or obstructious to, bridges, culverts, and waterways are permitted.	The water for all purposes is obtained from natural sprincs, which are well protected from contamination. The Darjiling water-works scheme has been extended to some places in this town.	Surface cleansing is well attended to, and house-scaveng- ing conducted by the municipal metters, the aveepings, e.c., being thrown those that "There are are an abilic latrines and 25 private once, and three uritads. The night-soil is buried in trenches at a distance from the baza. Middens or cess-pits do not exist. The arrange- ments for cremation and interment are astisfactory.

Darjiling	Wurseong - warm		- -	- -	- -	-	-	_	Overcowding of houses is general and they, particularly
Darjilink	Kalimpong— <i>Earal</i>	13,683	İ	10-09	19.	29.5	Drainage is free, as there is hardly any level land. See also page 134 of this Beport.	is taken from springs which areopen to poutstout. See also page 134 of this Report.	those of the Bhuteahs, are not kept clean, and gradings, poultry, &c., ary located in them. Conservation is absent. Refuse is now and then thrown over the kinds, and the commission of nuisances is not ancommon. Some villance are situated in the midst of heavy jumple. See also page 134 of this Report.
Jalpaiguri	Jalpaiguri—Town	7,947	**	10.19	25.	52. 8	The natural drainage is good, but is rendered abortive owing to want q fervise in the drains which are all kurcha ansett in soil which is and to interference by pits, hollows, and excavations. Arthing drainage is very defective. The drains in front of shops are obstructed by wooden structures.	Is taken from the river Teesta, but chiefly from Suwell, which are kutcha for the most part. The water of the Kurla river, which is also available is used for hathints and washing; very few drink lift. There are also three tanks. Defecation takes place on the banks of the Teesta, and forcal matter is cast into it by the people living near it. Only one of the tank—the Rajbari tank—has been set aside for drinking, and, excepting a few which are pucca, the condition of the wills is bad.	Surface cleansing is attended to, but imperfectly; the main roads being swept daily and the lanes thrive a week. The swe-pings are utilized in filling up or exartions. The house and kitchen relues is generally throw into the nearest convenient jungle. The cattle dunt is accumulated for manure within the precise of the people. There are seven public laterines, but only two are used, and they are not kept elean. The public are averse to these conveniences. Deficients in surface to the properties. Deficients is promiscuous. Most of the private laterines are unsign mainting management. The inght-soil is tremched. Encreachments on roads and excevations exist. The sexticities.
Julpaiguri .	Jalpaiguri – Bural	67,471	i	41.55	\$	13	Drainage is defective. Water rises up to three feet below the surface of the ground during the rains. See also page 134 of this Report.	Is taken from kutcha wells See also page 134 of this Report.	The floor of the houses are damp, and so the people on mackans or platforms. The pathways are filthy, but ashes and refuse heaps are to be seen houses, and filthy orcastions exist. No conserved outside the villares, but in some place are distant on the distant of the pathways are not filled in. See also page 134 of this Repro-
Julpsigusi	Sikarpur or Silliguri— Rural.			25.03	1 1 1	ŝ	Drainage is defective. of this Report.	See also also page 134 Is taken from kutcha wells, some of which are near ceas-pits. See also page 134 of this Report.	The house floors are damp, and people therefore along an archars. The footpaths are not fitting based of outside of rilages. See also The dead are districted. Report.
Jalpaiguri	Boda—Bera!		- 4002	5 8414		-	Drainage is defect fairly drained. Report.	ive, but village Jagdah is Istakea from rivers and wells, the water of which See also page 184 of this Report.	The houses are damp. The footpath conservancy. In viliage Jagdah there who clean the hat held there twice are disposed of outside of the village vest.
Johnstenti	Pateram - Rural	64,636		10.	- # 	-		No special account is yet available regarding the villages in this thana; but see page 134 of this Repert.	Report.
Jalpagari	Nyasguri – Burol	66,451	- IS	83.15	99.2	\$	No special account is yet available; but see	Is taken from kutcha, shallow, very much pollu- ted holes. See also page 834 of this Report.	In. The houses are built on raised crown for an inght. Befuse and rubbin by the wells. No conservancy. Defending the fields. The dead are disposed on the bos also page 134 of this Report.

Decom-Tows 69,161 '194 S'55 Denimare is very defective. The outliets are profession and the second and the	Dependent of the form rivers and shallow well. Where it is said to be good. See also page 134 of this Report. Dependent of the form of the follow well well well well with the follow of the follow well well well well well well well	Kernti-Raral 82,455 8	Alipur-Rara? \$2,086 .06 25'03 2'89 '31 No special account is yet available regarding the villages in this trials; but no present the control of the cont	Name of Girele. Name of Girele. Population. Population. Population. Population. Population. Population. Population. Population. Population. Population. Population.	RATIO OF DEATHS FRR. 1,000 OF POPULATION FROM—	lanes bourse estead. The finial retures from houses and kitchems is trenched, but a great deal of it is left within the premises. There are 15 public latines, but they are not kept properly clean and are insufficient. There are four public urmans which are well kept and tarred. Most of the private privies are not properly constructed. Five thousand five hundred of them are outder muncipal management, and are cleaned generally every other day, and some after three, four or more days, till in fact their contents overflow. There are many well-privies, and some after three, four or more days, till in fact their contents overflow. There are many well-privies, and extremely filthy hollows and tanks, more or less extensive, locally called "gent, still caried. The night-holl from the private ones to which access our behad is trenched, but in deep pits. Promiscause Jefton the private ones to which access our behad is a mediacing and intranural burials still continue, but to a inside and management and intranural burials still continue, but to a lingeled extent. Such grounds, however, are in a sent mediant.	185 E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	der, but the man- touse drains are in the whole thed upon exten- in many instances, sowers, simost are cess-pools. Sovers, on the six of the si	a bed condition, encrose series, and are, in fact, in better than enoughted parts of the town have no					
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	•	,	CXXVII				(App. v
The bonses are overcrowded and surrounded by trees and jungle. Deep excavations filled with water are to be met with. Conservancy nil. Deferention is carried on in fields. In some places there are scaeleds priving under which the forces accumulates. See also pages 155 and 154 of this Report.	The conservancy arrangements are not guite assigna- tory. Surface elemains is properly akended to best fluid refuse from houses is in some places thrown into the nearest hole or direct. There are eight of Hurnbury's parent iron public latrines which are kept in fair order, best of the private private private close to house and some are constructed over water-holes, but these private are cleaned by unnicipal meblers. Promises ous defongation is carried on to a great extent. The numerous pits and bellows about the fown. The numerous pits and bellows about the fown. The arrangements connected with markets and alaughter- houses are very objectionable.	See pages 153 and 154 of this Beport.	The houses are well raised, but surrounded with deep trenches contraining water with decomposing regardian. The house floors are rather damp, and the compound as eiterum with refuse of all kinds, specially dead are buried in the compounds of houser. See also pages 138 and 154 of this Report.	Seefpages 153 and 155 of this Report.	See pages 163 and 154 of this Report,	See pages 155 and 154 of this Report.	The villages renerally abound in trees, juncle and bamboo clumps, which obstruct air and san, albeing excavations exist containing water with decaying vegetation. Although the compounds of the boune are kept clean, their surroundings are fitthy with refless, sweepings and decaying leaves. Conservancy with refless, deed are buried in compounds of bouses. See also pages 153 and 164 of this Report,
Is taken from nuddis, bhits, tanks and wells. See also pages 183 and 164 of this Report.	Is taken from the Sital Lakhya river, khalls, and three fairly profected reserved tanks. One of the latter, however, takes in inward drainage. The river water is much polluted by defocation on its banks. There are besides many private tanks, but they are little better than foul cesspools overgrown with jungle.	See pages 153 and 164 of this Report	See also	See pares 133 and 154 of this Report	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	is taken from tanks which are foul, and dry up in the hot season. See also pages 153 and 154 of this Report.
Some of the villages are situated on elevated ground and some on low ground and are subject to inundation. See also pages L53 and 154 of this Report.	The drainage is fair. Most of the drains are kutcha, but they are kept in good order, thoush occasionally they silt up and are overgrown with grass. The condition of the house drains is generally bad.	See pages 153 and 155 of this Report	172 Some of the villages are situated on low lands. Is taken from nuddis, bhils, and rivers. See also pages 153 and 184 of this Report. pages 163 and 184 of this Report.	See pages 163 and 184 of this Report	See pares 155 and 154 of this Report	See pages 163 and 154 of this Report	Drainage is defective. Excavations interfere with surface drainage. See also pages 155 and 154 of this Report.
2.1	5.17	1.8	1.12	131	23	3.2	
8	88.	1.78	\$5.1	8	8.28	3.00	§
16.5	8	13.29	18-76	16.65	16.56	11.68	5.73
\$	20.		F	<u> </u>		800.	:
164,287	18,561	91.139	184,196	119,516	164,159	243,463	275,084
Lalbag or Kerni- guago—Bural.	Матындандо— Токи	Naraingunge—Eural	Manickrunge – Rara!	Kapasia—Rurat	Rapgunge-Bural	Manshigunge—Rural	Stingat - Baral
:	1				i	:	:
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Dacos	Peca	Daces	Decos	Dacca	Daces	Dacca	Deco

SANITARY ESTIMATE OF THE VILLAGES IN RACH CIRCLE UNDER THE HEADS OF-
Many villages are situated on hich ground Genes as in Navabance, but it is also taken from Same as in Navabance. But the manner of housing and at severe from exceptions, and concess veils the water of which is brackish. See also pages 158 and 154 of this Report. Report
Same as in Fewebrunge, but it is also taken from wells the water of which is brackish. See also pages 153 and 154 of this Report See pages 153 and 154 of this Report 1s taken from tanks and nuddis, but it is bighly pages 153 and 164 of this Report See pages 153 and 164 of this Report Rec pages 153 and 164 of this Report
Same as in Fawabrange, but it is also taken from wells the water of which is brackish. See also pages 153 and 154 of this Report
Water-supply. sme as in Ps wabennee, but it is also taken from wells the water of which is breckish. See also pages 153 and 154 of this Report. See pages 153 and 154 of this Report
Water-supply. sme as in Fs-wabennee, but it is also taken from wells the water of which is brackish. See also pages 153 and 154 of this Report. See pages 153 and 154 of this Report
Water-supply. same as in Fawabeunce, but it is also taken from wells the water of which is brackish. See also pages 153 and 164 of this Report.

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Paridpore	Muksudpore-Rural	156,983	à	12.46	1.6.1	-13	See pages 153 and 154 of this Report	See pages 153 and 184 of this Report	See pages 153 and 154 of this Report,
Paridpore	Madaripore—Rural	165,917	900	13.55	1.12	-ģi	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 183 and 154 of this Report.
Faridpore	Kotalipars—Rural	. 66,153	ş	18:39	01.2	\$	No special account of the sanitary condition of t of this Report.	No special account of the sanitary condition of the villages in this thans is yet available; but see general account, which is applicable, on pages 153 of this Report.	eneral account, which is applicable, on pages 135 and 154
Faridpore	Gopskunge—Raral	85,341		9.74	1.0.1	85	No special account of the sanitary condition of to this Report.	No special account of the sanitary condition of the villages in this thans is yet available; but see general account, which is applicable, on pages 153 of this Report.	meral account, which is applicable, on pages 183 and 184
Faridpore	Shibchar-Rural	116,043	ē	11.34	1.20	ç.	See pages 153 and 154 of this Report	See pares 153 and 154 of this Report	See pages 153 and 154 of this Report,
Faridoore	Palong-Rural	256,250	-003	10.12	2.88	07.	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report,
Faridpore	Goalundo - Town		Dats n	Data not available	996		The drainage is very defective; but no hystematic drainage scheme is called for for this town owing to the encroachment of the river necessitating a periodial removal of its site. At present surface drainage is naturally effect, ed through the Kati khal and other similar channels.	Is taken from the river, tanks and the Bailway cuttings. Four of the tanks have been protected and set spart for drinking purposes: and two almost unpracted wells are also used for this purpose. Water difficulty is felt in the parts of the town away from the river during the hot season when the Railway cuttings dry up.	The conservancy arrangements are unsatisfactory. The establishment is inadequate to attend properly to the work. As far as possible, street sweepings, house refuse, etc., are removed to the chur in the river and either burned or burned there. There are eight public latines for males and two for females. They are faulty in construction and kept unclean. Private meherrs attend to the private latinies. Private meherrs attend to the private latinies. Private meherrs attend in argely practiced. The nightsoil is buried close to the latinies during the dry season, and through info the river during the rains. Fits and excavations are numerous, the largest of them having been made by the Railway authorities.
Faridpore	Goalundo—Rural	1(6,650	\$	9.31	13.47	ŝ	No special account of the sanitary condition of to this Report.	t of the sanitary condition of the villages in this thans is yet available; but see general account, which is applicable,	eneral account, which is applicable, on pages 133 and 154
Faridpore	Pangsha—Eural	150,366	:	15.8	8.08	er.	No special account of the sanitary condition of to of this Beport.	t of the sanitary condition of the rillages in this thans is yet available; but see general account, which is appsicable, on pages	eneral account, which is applicable, on pages 153 and 154
Faridpore	Baliakandi - Rural	66,069		20.22	14.63	şã	No special account of the sanitary condition of to of this Beport.	the villages in this thanah is yet available, but see	No special account of the sanitary condition of the villages in this thanah is yet available, but see general account, which is applicable, on pages 183 and 164* of this Beport.
Beckergunge	Burnsal - Tosen	13,186		12.21		89	Dramage is on the whole defective, particularly in quarters furthest from the river. Most of the side-drains are connected with the tidal knals and are flushed daily and by thus means kept clean and free from obstruction, excepting during the winter and hot months, when the house refuse, &c., usually known into them, obstruct them and destroy their level. The house drains it require looking after.	taken from tanks and thals, and is abundant we of the tanks have been pretected and a part for drinking. These tanks are resorted to part for drinking. These tanks are resorted to the tell-to-do natives, no y others, who use kind waster which is naturally nich polluted, being connected with the idal hals, which in the from an connected with the town drains. The other numberless private with most of which are also connected with the dal khali, are not good; in fact many of their emere sewage pools.	The conservancy arrangements are defective, the establishment being insufficient for the requirements of the town. Surface elecanating is steeded to, and house returns to the completely. The find refuse from houses remains within the premises. Middens and foul houses remains within the premises. Middens and foul houses remains within the premises. Middens and foul houses and stakes and in felds, and the extra holds are fitting. There are only three public latrines which are not slways in a clean state. The single public urinal is in a bad condition. The condition of the private privise is bad, although under municipal management, Several of them are unprovided with receptacles for the faces, &c., and the night sail from them is not regularly what nighties is removed, is not properly tremched. The khals are used for defeoration. The Mahomedan interment is now and then allowed. The markets are not in a satisfartory condition, and intermural

			BATIO OF 1	OF DEAT	BATIO OF DEATHS PER 1,000 OF POPULATION FROM-	000,1	SANITARY &	SANITART ENTIMATE OF THE VILLAGES IN RACH CIRCLE UNDER THE HEADS OF-	DER THE HEADS OP-
District.	Name of Circle.	Population.	Smell-pox.	Fever.	Cholera.	plaints.	Dra inage,	Water-supply.	Domestic cleansing.
Beckerguuge	Burisal Rural	113,733	· ·	31.35	Ř	7.	See pages 148 and 151 of this Report	Is taken from small narrow khals, tanks and ponds. The khals become almost dry at ebb tide, their water is muddy, and cremation takes place on their banks, and cervasses are thrown into them. The tanks and ponds are polluded in very way, and cremation and interment take place on their banks. See also pages 139 and 151 of this Report.	When habits of the people are very fithly. Houses is in Mendhisunge, but the floors of some of them are raised on plinths. Mode of testing sweepings and refuse, conservancy defectation, same as in Mendhisunge. The cattle sheds are situated near sleeping rooms, and are damp and fitthy; cowdung is collected in heaps near fixeds are united about the restaution has partial with vecetation and partial waker are numerous. The dead are burief in house compounds in some places. The dead are burief in house compounds in some places. The dead are through house compounds in some places. Just they remain in them in a decomposed and puterious in state, the popple drink their waker. See also pages 149 and 151 of this Report.
Backergunge	Bowphal-Rural	95,188	e. 	11.83	19.	F	The sanitary condition of the villages in this thansh has not yet been ascertained.	hanan has not yet been ascertained.	· ·
Backergunge	Nalchitti—Town		Data 1	Data not available.	ble.		See pares 131 and 152 of this Report	See pages 15: and 162 of this Beport	See pages 151 and 152 of this Report.
Backergunge	Nalehitti— <i>Rural</i>	78,961		21.67	æ	.31	Drainage is defective. The ground being low, the villages are always inundated. See also pages 149 and 151 of this Report.	Is taken from tanks which are numerous, but nor have been reserved exclusively for drinking, an almost all are polluted in the usual way, and, is addition, by the existence of trees, and by inferential of cremation taking place on their banks and by deforcation in them from overhanging branches of trees during the ramy season. Sealso pages 146 and 151 of this Report.	The habitesse the people are fifthy. Houses as in Mendhiden, and, in addition, thick funge, about and to obvinke the great dampiness of the place, they are raised on plinths. The arrangements connected with consert, yancy, sweepings, refuse, and deforcation, same as in Mendhigunge. There are numerous pools and ditches fall of vegetation and steematt water. The dead eatthe are treated in the same way as in Barisal. See also pages 149 and 151 of this Report.
Backergunge :.	Perozepore-Toson		Date 1	Date not available.	ble.		See page 151 of this Report	See pare 15 of this Report	See page 15 of this Report
Backergunge	Perozepore—Rural	117,638		11:96	\$8.	å	The sanitary condition of the villages in this thanns is not yet available.	anna is not yet available.	
Backergunge	Jhalokati – Town		Dats n	Data not available.	ble.		See page 162 of this Report	See page 153 of this Report	See page 152 of this Report.
Beckergunge	Jhalokati—Baral	143,416	\$	5 2.5 3	1.28	91.	Drainage is defective. The ground being low, it is always inundated. There are numerous khals, so much so that communication between houses is carried on by their means in boats or bamboo raffs, there being thus no necessity for roads.	Is taken from small tarrow khals, which are numerous. The supply is but and insufficient, In addition to the usual modes of defining their water, carcases are exist into the khals, and people deforeate into them from Overhanging uranches of trees, and bury their dead on their lanks. See also pages to of this Report.	The habts of the people are fithy. Housease in Mendhi, grunge and Nalchitti, but the cowaheds adjoin the sleep, inc. rooms in many places. Conservancy and mode of disposal of sweepings and refuse seme as in Mendhi, gange.
Backergunge	Bhandaria—Rural	73,853		14.81	1.75	%	Particulars regarding the eanitary condition of	iars regarding the canitary condition of the rillages in this thanna, are not yet available.	
Backergungs	Berhansdy-Beral	190'68	9. —	18.14	80.5	94.	Particulars regarding the sanitary condition of	ers regarding the sanitary condition of the villages in this thanna, are not yet available.	
Backerkunge	Golachipa—Rura!	59,057	-	13.38	8.	33	Particulars regarding the sanitary condition of t	are regarding the sanitary condition of the villages in this thanns, are not yet available.	

•						prevent which ser with here and full of also pages	which serve for drains, and which are met with here and there, are generally obstructed and full of vegetation and putrid water. See also pages 149 and 151 of this Report.	are subject to potulton, and orpees and excusses are thrown into them. The tanks are numerous, and their water is replenished during floods, but none of them have been reserved a victuaively for durining, and all are polluted in the usual manner, and, in addition, by cremation and interment being performed on their banks. See also pages 149 and 151 of this Report.	to cocomini, and other trees, preventing perflation of air. In The veliages contain many accordations find of rank vegetation and putrid water. Jungle abounds. The houses and compounds are sweet failty, but the sweether in the backs of houses and sometimes in pits, and the kutchen retuse is thrown about to decompoure. The albeds in which cattle are kept at misth, are often situated in the back of the alcepting-rooms. Conservant wid. The benfs of ariver, khalk and tanks and the jungle are resorged to for deforation, and it is custom. The decomposition of the long and the start of the people to bury and creaming their de-identification the limits of their own lands. The dead cattle have treated in the same way as in Barisal, See also pages 18 and 151 of this Boport.
Backerkunge	Mendhigungo—Rural	146,711	F	19.82	99 82	1,18	Drainage is detective. The drains consist of small cuttings, and are full of vegetation and sagmant water. The villages are situated on low ground subject to inundation. See also pages 148 and 151 of this Report.	is taken from khals and tanks. The water of the former is muddy, and in the bot months brackish, and carcasses are thrown into them. The tanks are polluted in every way; have trees on their banks which are also the sites for ermantion. See also pages 149 and 151 of this Report.	The babits of the people are very fitthy. The houses are sortered, but surrounded by betchurk, ecconaut, and other trees, precluding free perflation of air; but they are injuly venilated internally. The ground is damp; are kept in heaps outside of compounds or in excavations in the back of houses. The cattle-sheds are situated away from the houses, but they are fifthy. No conservatory; defeceation takes place in ditches, on banks of tank, in the khals and jungles, and is any ounvenient place. Dead cattle are treated in the same way as in Barrisal. See also pages 149 and 151 of this Report.
Backergunge	Backergunge—Bural	135,396	8;	19-20	\$	\$	See pages 140 and 161 of this Report	Is taken from rivers and tanks, The dead cattle are thrown into the former; and the latter are in bad condition, and cremation and interment take place on their banks. See also pages 149 and 151 of this Report.	The habits of the people are filthy. Rouses as in Menchigunge. Jungle abounds, S me of the ditches contain vegetation and putrid water. Containvesting, disposal of sweepings and refuse, and defoncation same as in Menchirunge, and dead cattle are treated in the Same way as in Hariaal, See also pages 169 and 151 of this keport.
Backergunge	Eh.la-Rural	123,169	99	11.37	12	17.	No account of the sanitary condition of the villages in this thanna is yet available.	ges in this thanna is yet available.	
Backergunge	Patoakhalli-Kural	173,901	1,	95.11	9‡.1	*	No account of the sanitary condition of the villages in this thanna is yet available.	ges in this thanna is yet available.	•
Backergunge	Sharupkati - Bural	160,284	5	17.30	171	\$5	See psges 149 and 151 of this Report	See pares 149 and 151 of this Report 4	See pages 140 and 151 of this Report.
Bavkergunge	Gulishakhali - Bural	98,733		11.19	S: S	į.	No account of the sanitary condition of the villages in this thanna is yet available.	ges in this thanna is yet available.	•
Backergunge	Matharia—Rural	26,032	5 0.	16.49	2.24	\$	No account of the sanitary condition of the villages in this thanna is yet available.	ges in this thanna is yet available.	
Summan	Jamalpur—Toses	16,091	i	16.31	1.80	5:15	The natural drainage is good. The fall is towards the rivers and bills. The drains are cleaned by a temporary establishmeal which is emplyed when necessary.	The fall is to. Is taken from the rivers Brahmaputra and Jhensi, its drains are private wells and tanks. In the rains the rivers shmear which up.	Surface cleaning is not attended to The refuse, gar- bage, &c., of private houses are accumulated in their compounds. There is one public fatrine. No arrange, ments have been made for the disposal of night-oul. There are extensive jungles at Funtbarta, Carcames are thrown about within the Municipality.
Mymensing	Jamalpur—Rarol	193,238	ş	11.88	38	1.87	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 163 and 184 of this Report.

			BATIO OF PC	RATIO OF DEATHS PER 1,000 OF POPULATION FROM-	HS PER I	90,	SANITARY ESTI	SANITARY ESTIMATS OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	R THE HEADS OF
District.	Name of Circle.	opulation,	singil-pek.	lever,	Cholerre	Bowel-com- plaints.	Drainsge.	Water-supply.	ic cleansing,
Mymensing	KishoregungeTo		s I	1 8	19.6	<u>\$</u>	Drainage is defective. The kutcha drains carry off only a portion of the water to the Narsunda river and the bhils.	Is taken from the river Narsunda, which, however, is reduced to a chain of prois in the cold weather. Krein in the hearist of the rains if is choked with vegelation. The water of tanks also utilised. The cleaning and deepening of the tranks is always aftended to. Tanks reserved for the hashing purposes only, and the excavation of the Narsunda are a great desiderata.	The sanitary condition of this town is bad. Seaface cleansing is not properly and recularly attended to. What retuse and garbage are collected are employed in filling up pits. There are no public lattines. Melders are not locally procumble, so the people have their privies cleaned as best as they can, which means that they are generally in a filty condition.
Mymensing	Kishoregungs-Rural	122,705		90.21	131.5	.7	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 153 and 154 of th
M5mensing	Attia or Targhail—	442,119	\$	∂£.6	31	; ::	o special account is yet available; but see page	ial account is yet available ; but see pages 153 and 154 of this Report for general condition of the yillages.	of the yillages.
Nymensing	Nasirabad - Town		Dats not	of gyallable.	ne.		The drainage is defective. The fall is away from nearer; and the soil being allurial, regular drainage is difficult. Almost all the drains are kir'ha, and ther-fore demand constant artention. They are encreached upon. Levels have been taken for the improvement of the drains.	though the "iver Bhagirutti or Brahmaputruns gast the town, the people prefer to taken where are standard thanks. Some of the tanks are shoused thinking purposes, but others are also used which are also had condition the lot season. The banks of the river all alou the form, excluding the length of the city and also line them.	Surface cleansing is not well looked after, much fitth and other offenive matter being allowed to remain unremoved. Finish ionse redues is not properly disposed of Cattle dumt is accumulated till rotten for manure. There are four public latrines. There are no well. I there are four public latrines. There are no well- privise, but the latrines, both public and private, particularly the later, required. Promisconous defoce, catton is general. The night-soil is trenched, but not properly. Fits and excevations are numerous. The properly. Pits and excevations are unmerous. The night-soil arrangements connected with markets and slaughter- houses and disposal of the dead are unsatisfactory.
Mymensing	Kotwali or Mymen- sin-h or Nussirabau	582,846	15	16.36	33	1 08	Report	See pages 153 and 154 of this Report	See pages 133 and 154 of this Report.
Mymensing	Fulpore - Bural	114,467		19-89	3.26	12.	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	
Mymensing	Levargungs-Rural	229,453	-	13:37	1,4	68	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	-
		117,759	70.	14.05	1.18	8,	See pages 153 and 184 of this Report	See pages 153 and 164 of this Report	
		187,065		69.6	96	151	See pages 153 and 154 of this Report	See pages 133 and 154 of this Report	
	Dewanganj—Bural	101,373	9.	14.11	3.06	_	173 See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	
		209,258	- 80	86.8	4.53	7.	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report,
Kymensing	Nickli or Agrsin- aboo-Rural.	122,439	91	14.38	60.3	- es	See pages 153 and 154 of this Report	See pages 153 and 154 of this Report	See pages 185 and 10+ of this neport.
	-								

Mymensing	Pingna—Burad	76,362	ē,	24-65	27.	8.	The special account of the villages in this thann	account of the villages in this thanna is not yet available, but see pages 163 and 154 of this Beport for a general account,	is Report for a general account.	
Hymensing	G.pslpar or Madhu-	217,736	۶ 	12.96	1.53	7	The specie	il account of the villages in this thanna is not yet svallable, but see pages 153 and 154 of this Report for a general account,	Report for a general account.	.1
Mymensing	Netrakonah Burai	471,658	ğ	125	81.8	*8	See pages 153 and 154 of this Report	See pages 183 and 154 of this Report Se	See pagre 153 and 154 of this Report.	
	Durgspore-Rural	116,457		14.18	96.4	**	See pages 153 and 154 of this Beport	See pages 153 and 154 of this Report See	See pages 153 and 134 of this Report,	
Tipperah	Comilish or Kotwali— Zogra.	13,506	:	19.95	53.9	95.54 65.54	Drinage is very defective in some places in the native quarters; in other parts it is fair. The outfall is towards the laketra river which flows on the wouth and west of the town. The drains are both pucca and kutcha.	Is taken from tanks and the river. There if one tank, centaining good water, reserved for drinking purposes, and guarded from pollution, spinich is recorted to by the Europeans and the majority of the natives. Several of the other tanks also supply good water, which is used both for drinking and culmary purposes. The water of the remainder is fit for no purpose.	The conservancy arrangements are fair. Surface elements is properly looked atter. Sweepings and retures are employed in filling up gaps and dichee, of which there are many: but fluid retuse from houses is thrown into the nearest drain or dicht. There are only five public well-ordered latrines largely used by the prople. The private laftines are cleaned daily by the municipal mehiers. There are no well-privies. Nighthoul is trenched, but in deep pits. Promiscuous defocation is common. Cess-pits are not permitted to be dure. There are several graves in and near the compounds of houses, and new ones are allowed under special circumstances. Slaughtering of cattle takes place is the premises of the butchers.	WPPQQQQQQ
Tipperah	Comillah or Kotwali – Rural.	125,879	I	94.51	** **	\$	Some of the villages are situated on high and is taken from rivers and tanks, some on kw ground. See also pages 183 and and 184 of this Report.	See also pages 153	Generally the houses are dry and not crowded together. The house surroundings are as in other thansals. No conservator, The dead are cremated within the villages, See also pages 183 and 154 of this Report.	CXXXIII
Тірретћ	Brahmanberia— Towa	17,543	-	88.	11.68	e4 64	The drainage is fair. There are a large number of main and eves drains which empty into the river which runs past, and into a khal which runs through the town. They appear to be provided with sufficient culverts and stone-wate pipes.	Is taken from 25 municipal tanks. Care is taken to keep them clean, and their water is said to be generally good.	Surface cleansing is fairly looked after. There are only two public latines, the nichteoil from which is buried in their vicinity. There are a large number of private privites which are not slways in a clean condition, and the nichteoil from these is also buried close to them. Most of these structures are constructed over drains and hollows. Interment and cremation take place out of town.	
Tipperah	Brahmanbetia-	2048,731	Þ	15:49	2.30	8 8	See pages 158 and 164 of this Report	See pages 158 and 154 of this Report Se	See pages 153 and 154 of this Report.	•
Tipperah	Nobinagar-Raral	175,971		10.14	5.06	2	See pages 153 and 154 of this Report	See pages 153 and 184 of this Report See	See pages 153 and 154 of this Report.	•
		78,521	i	13.71	1-88	₹	See pages 153 and 154 of this Report	See pages 153 and 164 of this Report See	See pages 153 and 154 of this Report.	
Co Tipperah	Meredinger or Thol- lah-Rural	152,322		#.::	1.8	à	Drainage is exist, who Some vill drains. Report.	Is taken from the river and tanks. See also pages 183 and 154 of this Report.	The houses are built on raised ground and have dry floors. Many villages are full of judgle and trees. No conservancy. Some villages have privies, but the nicht-soil is not removed from them. Defocation is earned on in the jungles and fields. The dead are buried in Report.	7 7
		-	For a g	eneral	Booguni	t of the	· For a general account of the Sanitary condition of the Villages in the	condition of the Villages in this District, see pages 153 and 154 of this Beport.	ort.	VI,

			RATIO	RATIO OF DEATHS PER 1,000	HS PER 1	900	SANITARY ES	SANTIARY ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF		nn.
District.	Name of Circle.	.noilaling	-xoq-lla		.arolo	laints,	Drainage.	Water-supply.	Domestic cleansing.	VI.
Tippersh	Dandkandi-Barat	104 188	ms :	11.70	-\ <u>-</u>	d ¦\$	The villages are attacted on low ground and 1 many executions exist. See also pages 153 and 154 of this Report.	anks, bhils, nuddis, and hollows in aker scarcity is felt in some places season. See also pages 133 and 164	The houses are built on raised floors, but some of them are clean, but their compounds are filth. No conservancy. No privies. Deferention taken place in felchs and jungles. See also pages 183 and 134 of this Parent	
Tipperah	Chandpore or Tubki-	12,034	70.	10.01	121	*	The special account of the sanitary condessor of account of them.	The special account of the sanitary condensation of the villages in this thanna is not yet available; but see pages 153 and 154 of account of them.	but see pages 153 and 154 of this -Report for a general	
Tipperah		86,872	i	11:55	7	2.2	F. special account of the sanitary condition of	special account of the sanitary condition of the villages in this thanna is not yet available; but see pages 153 coount of then.	t see pages 153 and 154 of this Report for a general	
Tipperah	Sagonnathdihi or	103,218		14.54	ŝ	3	4. pages 153 and 154 of this Report	See pages 155 and 154 of this Report	Ree pares 153 and 154 of this Report,	
		114,168		14.49	1.68	99.	See pages 133 and 154 of this Report	See pages 155 and 154 of this Report	See pages 153 and 154 of this Report,	U.A.
Tipperan	Hazigange-Rural	172,347	6.	12.00	\$	115	The special account of the sanitary condition of of them.	account of the sanitary condition of the villages in this thanna is not available; but see pages 153 and 154 hem.	pages 153 and 154 of this Report for a general account	
<u>so</u>		82,130		13.60	13	60.6		Is taken from tanks and wells, one of the former of which is to be found in every house, and most of which are to be found in every house, and most also taken from springs, and is said to be unitalled, but the springs are newlected, 6 large tanks; 5 wells and 11 springs have been reserved for drinking purposes.	The sanitary condition of this town is very bad. The conservancy arrangements are inadequate and badly carried out. The whole town is a vast public laterine, all the hollows, hoes, and take township that the composed, are enclosed in bustic of which the town is composed, are enclosed in a dense jungle which permits of the commission of nuisatees and of the ledgment of filth of all description. There are 12 public laterines but their gradition is as fad as the bustice and the bustices.	
	•	•					ed	•	latrines are for uncer interaction. They consist generally of mat enclosures over the milabit the water of which receives a great deal of the face) matter. The wealthier clawes employ methers, but the night-coil is buried in the nearest waste land. The night-coil from the public harriants renched in the jail genden. The arranteements under the head of disposal of the dead, markets and slaughter-houses are objection.	
Chittagong	Chittsgong — Barel Barel Barel Barel Barel Barel Ball Barel Ball Bathesari Hathesari Bathesari Kumura Kumura	53,022 144,390 76,799 1191,748 1191,780 1147,516 118,500 118,500		11.55 11.56	#	#2 k # # # # # # # # # # # # # # # # # #		e vilages in the Chittsacons district cannot be furnish by not visited these villages owing to Laccination not	The account of the sanitar's condition of the villages in the Chittaxonz district cannot be furnished, as the efficers of the Vaccination Department, where yet a duty it is to furnish the information, have not visited these villages owing to Vaccination not having yet been introduced into them.	. 4 6
	=	-	_	;	_					

•	Chakaria Mahashballi Teknakor Ukbia,,	28,62 20,168 26,646		12.21		ម្នង់ <u>ខ</u>			
Noakholli*	Sudbaran - Tous	5,124		80 80	95	*	The drainage is very defective. There are numerous drains connected with one another in which water stagnates during the dry wateher. Most of the drains are kutchs with irregular levels. During the rains the drains are washed out by the tidal khals.	Is taken from tants, four of which have been Feserval for drinking purposes. The water of one of the latter is good, that of the officer susptions. All the other tants are polluted in every possible way, mostly by the drain-latrines and surface drainage.	Surface cleanning is very partially attended to, the establishment being inadequate. The sweepings are thrown into the kinals or into encourations. The sweepings and Friuse of houses are allowed to rut in the compounds or thrown into ceasurits, every house having one. There is only one judic latrice near the hazar. The nightsoil from it is buried in its neighbourhood. There are also we private parties, but the drains are also used as such, a bamboo macakas being placed over the claes of the drain with a mat seven. The nightsoil from these latrines is never removed, but is washed out during the rains, often into the drainking tanks. Fluid refuse is also observed in the compound of houses, informed are in many cases carried on in the compount of houses, and evenation is not quite satisfactorily done.
Noak halli	Sudharam—Kuroi	96, 194	19.	17.02		F	footpaths	Is taken from tanks. The supply is sufficient, but no care is taken to protect them from pollution. See also pages 153 and 154 of this keport.	The villaces are full of excavations and diches containing stagmant water and 'wectation, and the houses are unrounded by betalinut and cocoanut trees which impede ventilation. Conservator nil. The people have unchan prives, but the droppings are not removed. The dead are interred and cremated in the house compounds generally. See also pares 183 and 184 of this Begorg.
Noakhalli	Sundeep—Rural	72,407		12-21	\$	É	Drainage defective. The reads or pootpaths Is taken from tanks. have no side drains. Secusiso pages 153 and 154. See also pages 153 at Secusion pages 15	Is taken from tanks. The supply is sufficient, but no care is taken to crotect it from pollution. See also pages 153 and 154 of this keport.	The villages are full of excevations and disches containing starmant water and vecetation, and the houses are surrounded by betainut and cocoanut trees which impede venitation. Conservancy nil. The people have machan privies, but the ordure is not removed. The dead are interred and cremated in the house compounds generally. See also pages 153 and 154 of this Beport.
Noakhalli	Fenny—Baral	132,697	19.	16.34	\$	2.	The villages are situated on high ground. See also pages 155 and 154 of this Report.	Is taken from tanks and khals. The former do not dry up. See also pages 153 and 154 of this Report.	The house floors are dry. No conservancy. No regularly constructed latraines. Peonle generally resort to the fields for deforeation. See also pages 133 and 153 of this Report.
Noakballi	Chagalusys-Bard	109,278	•	27.02	**	\$5	The villages are situated on high ground. See also pages 153 and 154 of this Report.	See Is taken from tanks. See also pages 153 and 154 of this Report.1	Concervancy absent, Cremation is carried on near bhil. Interments take place near the tanks. See pages 183 and 154 of this Report.
Noskhalli	Banni –Rural	41,731	\$	02.03	\$	35	Some of the villages are satuated on chur land See also pages 153 and 154 of this Report.	See pages 153 and 154 of this Report.	See pages 163 and 164 of this Report.
Noakhalli	Hatia—Bural	40,296	80.	18.28		*	See pages 153 and 154 of this Report	is taken from tanks which supply sufficient warer throughout the year. See pages 153 and 154 of this keport.	The houses are ill ventilated. There are few trees and no jungle. No conservacy. The house compounds are filthy and untidy. No latri-es. People resort to the marshes or fleds for deforcation. See also pages 183 and 184 of this Report.
4.				-					m. as an interest of the street is little annua for will and assistation is as

* For a general account of the Sanitary condition of the Villages in this District, see pages 153 and 154 of this Report. The Magistrate reports that there is little scope for village sanitation in this district, as the people do not live in villages properly so called; and that as almost every bar has its own tank, which is used for all purposes, the clushing and preservation from contamination of the sanks cannot be easily done.

. 4

				and are full of The dead are I tanks, See	anded to, the inicial streets are days, and hollows. The hollows. The public brines of which 5,000 which 5,000 which 5,000 which 5,000 which 5,000 which 5,000 which 5,000 which are one some oil and liquid The tearching finess. There is for the discent. There are always from the discent. There are a large of which are large of which are large of which are large of which are large of which are large only	unsatisfactory. 1 to There are rest undeanli- prefering the ut 1,400 well. and regulary sal of the dead	a placed under the cleaning is pringer. Lt. are pringer. There or increasible. own into the for. There are
ER THE HEADS OF-	Domestic cleansing.	Seme as in Sudharam,	See pages 153 and 154 of this Report.	See also pages 153 and 154 villages are gituated on very low ground and are full of bette-intra and coosanut trees and tanke. The dead are burned on the hanks of oil and unused tanks, 88e pages 183 and 154 of this Report.	Surface cleansing is insufficiently attended to, the establishment being insufficiently attended streets are swept daily and the lanes on attenues days, and the sweepings are employed in Blins up hollows. The cattle-sheds are in a very fithy condition, the cattle sheds are in a very fithy condition, the cattle standing deep in mite. There are and evened of Ramsay's portable latrines. There are well-privites. The remainder are under the management of the Municipality. The public latrines are insufficient. Those who do not resort to them, or have no private privite, deference in waste-places, 4c, and some use bits of gumlahs or tiles. The night-soil and liquid grounds are cultivated, but they are insufficient. The resort to dead are remached in distant places. The susufficient. The post of the dead are unsatisfactory. There are a large number of private burial-grounds many of which are crowded, and two burning ghats which-are used only during the rains.	The chaserrancy arrangements are very unsatisfactory. Sufface changing is insufficiently attended to. There are five public latrines, but ownize to their great uncleantly ness they are not recorted to, the people prefering the fields and waste pieces. There are about 1,400 well, privies. The ordinary private privites are not regulary cleaned. The arrangements for the disposal of the dead are defective. See also page 159 of this Report.	The conservency arrangements have been placed under the management of a contractor. Surface cleaning is not properly astended to; and the sweepings-gg, are thrown wherever the contractor things proper. There are 12 public latrines two of which are inaccessible. The night-soil is trenched. Fivate burial grounds river, and the pauper dead are not cared for. There are no markers or shaughter-houses. See also page 189 of
SANITARE ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OP-	Water-supply.	Same as in Sudharam	See pages 153 and 154 of this Report	Is taken from tanks. See also pages 153 and 164 of this keport.	is taken from the river and wells. There are 50 former and several of the latter are wells. The although the private wells are kurcha and although the water of some of them has been condemned, it is generally believed to be wholesome, which is generally be the case, as surface defilencent is general, and the wells are situated in proximary to well-privies.	Is taken chieffy from wells, and at times it is insufficient. See also page 159 of this Report,	Is taken from the Ganges, and some of the prople use well water. See also page 159 of this Report.
SAMITARE ES	Drainage,	Same as in Budharam	See pages 153 and 154 of this Report	See pages 183 and 164 of this Report	ting a few, xxxxxxxions tew also ob- ubbins and the house the house within sand neces, and neces, con. s, &c.	Drainage is very defective. The street and house drains want inoper width, levels, fall, and outlets, See also page 159 of this Report.	There is no regular drainage system. The main streets have purces side draina, but they are not properly attended to, See also page 139 of this Beport.
8 J	Bowel-com- plaints.	**	ĕ	ş	g 5	1.51	83.9
MATIO OF DEATHS PER 1,000 OF POPULATION PROM-	Cholers.	1.03	ş	1:59	9.29	75.	1.62
OPULATI	Fever.	14.20	16 48	13 98	27.2	80.9	11.28
MATIO OF P	Small-pox.	i	ē	į	10.	2	\$
	Population.	125,933	113,321	80,732	160,537	48,971	23,610
	Name of Circle.	Begungunge—Kurai	Lakhipur—Rural	Ramgunge—Rural	Petna - Toera	Behar Tours	Barb Town
	District,	Noskhulii	Noakhalli	Noakhal		Patna	Patns

Patras	:	Dinapur-Toera		62,235	1	8.8	8.0	88	Particulars regarding the sanitary condition of this town are not yet available.	is town are not yet available.	
Patna	• • • • • • • • • • • • • • • • • • • •	Mokamah - Toura	 		Data not	Data not available.	la.	1	Particulars regarding the sanitary condition of this town are not yet available.	is town are not yet available.	
Patns	,	Petra-Esrai. Behr Barh Dinapur Mohamah Fatuba Monair Ataserai Salao Bankipore Masouri Birram Hilsa	111111111111	23, 474 253, 412 170, 589 11, 387 11, 387 11, 387 18, 588 18, 516 180, 613 180, 613 116, 613	20. 20. 20. 20. 20. 20. 20. 20. 20. 20.	10.76 18.58 18.19 20.29 20.29 16.17 16.37 16.31 16.31 16.31 16.31	1.48 .88 .88 .98 .98 1.94 1.98 1.98 1.99 1.99 8.57	4.33 11.33 6.88 6.88 6.88 1.48 1.04 1.08 1.70	See pages 154 to 157 of this Report Se	See pages 154 to 157 of this Report 6	See pages 154 to 157 of this Beport.
		-									
Gya	1	Gys.— Rarat Paudnagar Arwal Arwal Sahangkar Bajali Saharghati Atri Lehanabad Tikar. Barachitti Brachitti	11111111111	215,392 92,236 39,173 110,435 96,775 162,519 78,516 77,516 176,905 176,905	97. 80. 80. 80. 80. 80. 80. 80. 80. 80.	25.50 19.74 16.33 16.93 114.33 23.07 15.70 17.50 17.50 19.53	2.62 80 50 67 7.6 87 87 87 87 87 85 85 85 85 85 85 85 85 85 85 85 85 85	<u> </u>	a trade	the villaces in the Gys district are not at present a, have not yet visited them, as vaccination has not j	iculars refarding the sanitary condition of the villaces in the Gys district are not at present available, as the Officer of the Vaccination Department sendy it is to furnish the information, have not yet visited them, as vaccination has not yet been introduced into them.
Gya	1.	Gya-Towa	i	76,121	8.	18.87	17.6	9.9.	Draunge is very defective. Much of it is underground, not admitting of flushing. The new drains do not act freely, and the state of the Khawa ditch and of the man outlet of the Rhawa ditch and of the man outlet drains have been extensively, and are still being, built over. They have also been universally blocked, and are full of stinking alush at places.	Is chiefly taken from purce wells. Six of them have been protected, but well water cannot be wholesome, as there is miditration into them of foul water from many houses and alarea number of prives. There are tanks also, but they see not in proper order, and their water is not drank, many of the inhabitants of the old town take their supply from the river bed which receives the drainage of the town, and is fouled by defeccation and burial in it of the pauper dead and carcasses.	The conservancy arrangements are unsatisfactory. Surface cleansing is attended to, and the public lattines (34 in number) area, kept in fair order; but the private ones are in an objectionable condition from not being cleaned for days together, and promiscuturinals, but they are situated in localities where they are not required. The nightfool is frenched in the fields of private individuals for which Ha. 10 to Ea. If per biggal, is charged. There are numberless pits and excavations. The deaff are cromated on the bed of the river.
\$		Daudinegat—Town	: ,	018,6	2.13	\$.	4	9.	The drainage is pretty fair. There are some Is pure, drains along the roadsides, but most pure drains are kutcha. The fall of all the drains is towards the entrenchment and the Some river, and is easy, so that rain water runs off in all directions. The centre of the town is higher than its one skirts. An outlet for draining the trench is required.	Is taken from wells, of which there are very many. Some of them are pucca, and they afford an abundant and wholesome supply, but many of the others are polluted. The water of the canal, which is within easy reach of some parts of the town, is not much used.	The houses are crowded together, aurines cleansing and the cleaning of the drains are attended to; but on the whole, the conservancy arrangements are ugatisation. There are no public latines, and no arrangements have. There are no public latines, and no arrangements have been made for the disposal of hightest from the private private. The house drains are in an offensive condition. The ditch around the town is the receptacle of all kinds of fifth, rubbish and offensive matter, and is consequently a source of unhealthiness.
		-	-		-			1	semiters and ition of the Villages in this	Andition of the Villages in this District, see pages 154 and 155 of this Report.	p ort.

* For a general account of the Sanitary condition of the Villages in this Distrut, see pages 154 and 155 of this Report.

R THE READS OF-	Domestic cleansing.	The conservancy arrangements are, on the whole, fair. Surface cleansing and the disposed of fluid retruse from houses are properly attended to. There are five public latrines which are kept in good order. The private private consist of both surface and well-private, private private consist of both surface and well-private in a fairly inoffenive condition. The night holes and excrations about the town, but they are being filled excrations about the town, but they are being filled excrations about the two, but they are being filled at the deed, markets and slangher-bouses call for beiter attention.	The houses are crowded together, preventing perflation sof air and the crowding of numates within the houses at night is general. No conservancy, and no sarriac clearanies. The liquid refuse soaks into the ground or finds its way to the reads, and the solid portion is threwn its way to the reads and the solid portion is threwn private ones cousts of sundances or well-privies, but the people in general delocate wherever most conventuo to them. The fluid refuse from the cowhelds, which are near the houses, soaks into the ground or which are near the houses, soaks into the ground or fluid its way to the roads, and the solid portion is thrown on the roads or drived for holf. There are pits and hollows centaining decomposing vegetation. See also pages 182 to 137 of this Report.	See pages 187 and 138 of this Report.	The soil is porous and absorpe moisture. Some of the villages are situated on high ground. Filthy habits is the rule with the people. The house floors and compounds are swept, but the auroundings of the house are very filthy. The sweepings are collected in heaps are very filthy. The sweepings are collected in heaps till wanted for manurum the peoply fields. The cowdung is used as freel, but during the rainy season the jointers accumulate them here and there. Deforcation is promiscuous. Tanning of hides is carried on within some villages. See also pages 154 to 137 of this Report.	Sec. pages 154 to 157 of this Report.	The houses are crowded tracther and defective in Tentis. Istion. Overcrowding of immakes in them at rights is general. The house surroundings are ery flithy. There are no conservancy arrangements. Calls of nature are obeyed wherever most convenient to the people. Refuse is collected in heaps. See also pages 154 to 157 of this Report.
SABITABT ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF-	Water-supply.	Is take ralmost entirely from the numerous wells all over the town. There are also nine tanks set apart for drinking purposes, but the people don't resort to them for this purpose, but use them for bathing. The wells are polluted, and their water is very impure. The tanks are replonished with caual water whenever necessary.	The river supplies the drinking water, but bething is carried on in the same places from which it is drawn; and for this purpose wells, kutchs and not protected from politice, are also resorted to. See pages 154 to 157 of this Bepart.	See pages 157 and 138 of this Report.	Is taken from wells and tanks. The former are provided with parapets, but their surroundings are fifty. The latter are unprotected, bee also pages 154 to 157 of this Report.	See pages 154 to 157 of this Report.	Wells supply the water for all purposes. They are mostly kutchs, and as bathing and washing of clothes, &c., are carried on near them, they are very foul. See also pages 15s to 187 of this Report.
SANITABY EST	Drainsee.	Dranage is defective. All the drains are kutcha, deficient in level, and not properly looked after. They are, moreover, much encroached upon and blocked in many places.	Drainage is defective. The reads serve the Tupryse of famins. Wholing the rains, water stands on the roads till it evaporates. See also pages 154 to 157 of this Report.	See pages 157 and 158 of this Report.	Drainage is defective. The natural drainage is bad and is much obstructed by the canal embankment on the north. See also pages 154 to 167 of this Report.	See pages 154 to 157 of this Report.	Drainage is very defective. The surface water finds no exit, and there are deep excavations full of foul water. See also pages 184 to 157 of this Report.
900,	Bowol-com- plainta.	\$,5 4		5	13.	89.
RATIO OF DEATHS PER 1,000 OF POPULATION PROM-	Cholora.	7	60	ole.	35	94.5	1.8
PULATIO	.te /eT	ಕ್ಕ ಪ	19.60	Data not available,	8.08	92.24	95.03
RATIO C	Small-pox.	ş	92.	Data no	2 6	10.	3.
	•noitaluqo¶	43, 165	881,487	_	165,760	104,647	185,879
	Nane of Circle.	Arrah - Town	Arrah—Rural	Sasseram—Totor		Kurrher or Nokha-	Belouti-Rural
	District.	Shabebad*	Shahabad	-		Shahabad	Shahabad

The houses are crowded together and defective in venti- stion. Some of the roads have been metalled, others are kutcha, but they are not cleared, and are rearrands ed upon near the baar. Surface clearang is athended to the sweepings and reture being employed in filling up, hellows and ditches. The Commissioners take the particular the sanitary concerns of the terra- There are public latfines for myles and females, but they are not generally used, calls of nature being obeyed the oran. More lattines are required. There are annulassed or well-privites in several houses. The night- soil from the public and private lattines is trenched. The soild reture from houses is deposited on the roads and ranced by the conservancy cark, but the find portion is collected in pits within most of the bouses. The arrangements regarding interment and cremation are unsatisfactory, there being not fine place for the purpose, and no special arrangements for the contagi-	The houses are crowded together and defective in ventilation. The refuse and sewage are accumulated here and there, and the house sweepings are thrown on the roads. Proniscuous defeccation is the rule, the children generally reacting to the roads. See also pages 15s to 137 of this Report.	Surface cleansing does not appear to be aftended to. There are four public latrines. The private privies are under municipal management. There are no well-privies. The mithisoil is either buried or deposited or privies. The final dead are existentially outside of most house. The Hindu dead are either cremated or thrown into the river. See also page 168 of this Report.	The houses are crowded together and ill-ventilated, Concuerancy sid. Sundasses or well-privine exist. Fromisculus defrecation is general. The sweepings and reluse are accumulated in front of the houses. See also pages 154 to 157 of this Report.	ort.	The habits of the people are filthy. The houses are crowd-d and ill-rentilated but their floors are dry. They are swept, but the sweepinss are accumulated for manure. We conservancy. The cow-dung is used as fuel, but in some villages it is accumulately for manure. The fluid retues scaks into the house drains with here and there. Heaps of retues are to be met with here and there. Children defocate on the footpaths, and the people wherever convesient to them deed are cremated within, and m some villages the deed are cremated within, and m some villages the bee also pages 154 to 137 of this Refort.
The houses are crowded alation. Some of the ros are kutcha, but they are du upon near the basar, of the weepings and nup hollows are divident in the resonal interest in the There are public laiffully at the ordering the town. More latriced from the town and assess or well-privise all from the public and and remes from the public and remes from the public and remes from the public and remes from the public and remes from the public and remes from the public and remes from the public and remes from the surface from the surface from the surface from the surface from the public and remes from the surface from the s	The houses are crowded toresther and defective listion. The refuse and sewage are accumulate roads. Promiscuous defecution is the children generally reacting to the roads. pages 154 to 187 of this Report.			Sempsye 158 of this Report.	The habits of the people are filthy, erowded and illy-entilated but their floor are swept, but the sweepinss are as manure. No conservancy. The covariance it is a manure. The fluid refuse soaks into tangently on the sand refuse soaks into tangently and sand the soul there. Children defore paths, and the people wherever conwermily on the banks of tanks. In a generally on the banks of tanks. In a dead are crounsted within, and in some See also pages 154 to 137 of this Reffort.
Well water is chiefly used. The public wells are surrounded with masonry parapets and platforms, so that inward drainage is obviated. Canal water is used for cultinary purposes. See also page 167 of this Report.	Wells supply the chief drinking water. They are situated on high ground, but most of them are kutcha. See also pages 154 to 157 of this keport.	Is taken from wells and the river. The river water is gond, but during the rains silt is washed into it. The water of most of the wells is brackish. See also page 188 of this Report.	Water is chieffy taken from wells. Some of them are purca and some kutcha, and their water is not free from pollution. See also pages 154 to 157 of this Report.	See page 158 of this Report	ge is defective. The foot-paths serve Is taken from the river and wells. The wells are The urpose of drains. The rain-waket stands provided with garapets, and in some places their und there in deep excavations. See also in a have frameworks, but their surround as are lines are failth, and their surround as are situated on high ground, but not provided may with channels for the entrains and extention with channels for the entrained and extention and defecation are earlied on close to them. See also pages 164 to 137 of this Report.
The drainage is defective. The roads are provided with aid-drains, excepting at the bazar, where there are kutcha drains which are not kept clear. Some of the drains generally remain filled with canal water, causing dampness in their locality. See also page 157 of this Report.	Drainage is defective. See also pages 15s to 157 of this Report.	The drainsge is defective. The drains which exist, only remove superfluous surface water. See also page 158 of this Report.	Drainage is defective. The footpaths serve the uprages of drains, and deep excavations exist which contain water all the year round. See also pages 154 to 157 of this Report.	See page 158 of this Report	Drainage is defective. The foot-paths serve the purposes of drains. The rain-water stands here and there in deep crewatious. See also pages 154 to 157 of this keport.
278	25	17.2	3		81.
77 '	29.67	68. 9	1.89		23 12 2475 1'04 13 Draina the pages
7.4 7.4	£2.	15.62		availabl	27.2
3	80.	,	:	Data not available.	93
17,885	242,108	17,668	145,587	·	171,883
Bumrson—Town	Dumraon—Rarad	Burar - Town	Burn and Chowes.	Bhabuah-Town	Bhabnah, Dureavati, and Chand-Eardi.
Shahabad	Shahabad	Shahabad	Shahabe.:	Shahabad	Shehabad

	RATIO OF DRATHS PER 1 OF POPULATION PROM	SANILARE ROI	SANITARE ESTIMATE OF THE VILLAGES IN RACH CIECLE UNDER THE HEADS OF-	OR THE HELDS OF—
Population Population Population Gloofera. Gloofera. Cloofera.		Drainage.	Water-supply.	Domestic cleanaing.
Dehri-Rural 78,884 '38 35'34 2'19 '21 See pa	E E	See pages 154 to 157 of this Report Se	See pages 154 to 157 of this Report	See pages 154 to 157 of this Report.
Dhungain—Rerol 179,916 .05 35.45 5.10 .28 See p	arkes	See pages 154 to 157 of this Beport 86	See pages 154 to 157 of this Report	See pages 13s to 157 of this Report.
Jugdispur-Tours Bee page	S dist	s 158 and 159 of this Report	See pages 153 and 159 of this Report	Scorpages 188 and 189 of this Report.
Mohanis or Ramghur 150,413 '03 37'56 2'85 '25 Most of ground. absorbe a not referred to some a not referred to some a not referred to some a not referred to some a not referred to some a not referred to some and the direction of the directi	of t nd. ros ros me o at:on fficien fficien one direction 3 154	the villages are situated 'n high Their soil is porous and easily set. Stagnation of water takes place of them and in some near which the in canal runs, the drainage is no everage to the syphon tubes of the man use uncoular to carry of the syphon tubes of the places a chance has taken place in charge of the drainage. See also 4 to 137 of this Report,	Same as in Bhubuah. See also pages 153 to 157 to this Report.	See pages 134 to 157 of this Report.
Peero-Rural 179,482 '01 21.76 7.19 '15 See pa	3 2	See pages 154 to 167 of this Report 8	See pages 154 to 157 of this Beport	See pages 154 to 167 of this Report.
Mozufferpore—Town 42,742 :39 11.95 5-24 3-97 There is sandy a solution of drains but the bu	a is an is a	and ill-drained. The site of the town owards the rice fields to which the side hould carry off the surface water, and drains generally have hoted up and obstructed, and are in level. A scheme of drainage has, r, been sanctioned for the town.	taken from wells, and the river Gundak, and from tanks. The last are very fifthy and receive however, and water a however, not used for drinking purposes, and rell water is news preferred, not withstanding healt its generally bracklish. There is only one nuncipial well, but many of the private wells are been probected by parapets from pollution, nut coakege around the wells is general.	The conservancy arrangements are defective. Surface cleansing is well looked giver, but the fluid refuse which it is removed to collect in esserptois from which it is removed and thrown only as a little distance from the hourse. The sweepings and refuse in filming up hollows. There are in public latrines, in filming up hollows. There are in public latrines, in filming up hollows. There are in many private private generally pucca. They also are in a bad stake. Promisciques defectation is very seneral. The nights-cities is termiched. The catchesheds are very filthy, and are cultivated. The catchesheds are very filthy, and many foul pils and waster-holes are to be seen all over the town. The arrangements under the beads of disposal of the dead, markets, and slaughter-houser need more attention.
Hajipur—Town 25,695 '23 6'30 4'79 5'87 Prain havin	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Trainage is said to be satisfactory; the streets having been provided with ade-drains, purca and kutcha.	Is taken from the river, wills, and tanks. The granity of the water is believed to be particularly good.	Surface cleansing is looked after; private house scavery, ing is not quite satisfactory. There is a Crubic sested moreavle lattin, but more are much required. Well-price stift in private houses. There is no trenching ground for night-soil, but git is buried in ditches as some distance from habitations. There are 106 buried places within the town.
Sitamarhi—Zbers 6,125 1'14 17'14 '46 3'42 Informs		tion has not been furnished	Is taken mostly from wells. Eiver water is also used for drinking, but by a few.	The street sweepings and garbage are removed. There are three public latrines. The roads are kutche.

Mozufferpore	Lalgunge ~ Town	16,783	•	13.51	ģ	9.4	Drainage is said to be astifatefror. The dwn 1 is intersected by numerous water channels and embanked by several roads. The drains discharge into several tanks.	13 taken irom numerods wens ***	outlying villages in the north and south. Many of the houses are substantially built. Surface cleanering is looked after, the retuse and garbage being removed to a distance from the town and buried, and the sweeping are utilised in filling up hollows and ditobes. There are no public latrings.
Mezufferpore	Monferpore—Rarat Sitamarhi, Beleund and Belamochpakun- nia—Rarat Paro and Budraj— Rarat Rarat Rarat Rarat Rarat Rarat Rarat Mahwa—Rarat Hajeepur and Mahuar "—Karat Propree (Jeley)—Ra- Feley — Rarat Rayat Rayat Rayat Rayat	800,596 187,340 187,340 187,340 181,033 191,444 244,530 182,516 146,116	8 8 4 1586 8 98	7.31 9.87 5.00 8.52 14.18 11.23 10.73 6.61 8.80	÷ ÷ × × × × × × × × × × × × × × × × × ×	91. 15. 25. 17. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	Particulars regarding the sanitary condition of the Department, whose duty it is to furnish the in	the villages in the Mozufferbore district are not at nformation, have not yet visited them, as vaccination	ars regarding the Sanitary condition of the villages in the Mozuffernore district are not at present available, as the Officers of the Vaccination function has not yet been introduced into them.
Durbhanga		990'99	e,	11.15	13	86	The drainage is very defective. The drains are deficient in level and non-effective from obstruction and earth taken out of them. Hollows and earth into which the drainage finds its way. During the rains the whole town becomes consequently waterlogged.	Is taken from the river Bhagmati and fronumerous wells, of which 8 are public an protected from pollution. There are also reserved, good and larve tanks for drinking, as 8 for bathing purposes, and a larve number extremely fifthy ones. The banks of the rive are fouled by deforation.	Surface cleansing is fairly well attended to, and the sweep- inrs employed in filling up bollows and excavations. In fluid retine is thrown into ditchea. There are 5 public latrines. Most of them contain accommoda- of tion for fewness, and they axe, on the whole, in a flithy condition and are insufficient. Mush defilement of the ground by defocation is carried on There are a very large number of private fatrines, but they are not kept clean. The minitaoli is trenched, jour not the vole, and the plan of trenching is unobjectionable. The arrangements for the disposal of the dead are unsatisfactory. There are a large number of private burial-grounds which urgently require to be closed. The market has no latrine, but has a filthy urinal.
Durbhanga	Durbhanen—Karal Inlingseral Talpore Kaloriasi Khajowil Phocipuras Madinbani Resera Bahera	887,488 278,504 306,489 109,946 110,540 271,772 286,605 389,873	25 55 55 55 55 55 55 55 55 55 55 55 55 5	6.86 14.91 17.56 13.43 10.60 10.60 10.61 4.18	14. 22. 21.1 21.1 22. 23. 24. 26. 26. 26. 26. 26. 26. 26. 26. 26. 26	21:20:12:25:25:25:25:25:25:25:25:25:25:25:25:25	Particulars regarding the sanitary condition of whose duty it is to furnish the information,	the villages in the Durbhanca district are not yet a have not yet visited them, as vaccination has not ye	lars regarding the sanitary condition of the villages in the Durbhanga district are not yet available, as the Officers of the Vaccingtion Department, a duty it is to furnish the information, have not yet visited them, as vaccination has not yet been introduced into them.
. Sarun	Chupra—Toera	53,249	190	\$1 \$1	1.7	3:15 T	5 The drainage is extremely defective. In fact this town is considered the most badly drained one in Bengal. It is so lowlying that proper drainage is difficult, but a scheme of providing the town with saucer drains is about to be undertaken. The existing drains are rendered non-effective by heing than are rendered non-effective being that stagnant water is collected in being that stagnant water is collected in health.	Is taken from wells and the river, and from three of the largest tanks which are granded from pollution. The well water is said to be good and plentiul; Thu it cannot be good on the whole, as the mouths of many of the wells are flush with the ground surface, and their surroundings are filthy and sludgy.	Surface cleaning is attended to, and the sweepings are sold as manure. Some of the cattle sheels are filthy. There are in ordinary latrices and il moreable iron genes. They are kept clean, but more of them are required. There are nine public urinals in fair order. There are many private latrines, but they are for the most part unclean. From source defectation is largely carried on, the nith coil from the public and private latrines is trenched, but that from one of the latrines is a shed mixed with dry earth for sale as manure.

* The Megistrate Mr. Clay says that "in Sarun, as in other districts, village sanitation is unknown, but owing to the dense population the nuisance, caused by the disregard of the simplest conservancy necessary purposes with a 'puddle to their shored,' the shoophere in the neighbourhood of towns and large villages would be greatly improved."

p. V	IJ				estates estates	The street of th
	Domestic cleansing.	admit Surface cleansing is looked after, and the sweepings, &c., utilised in filling up ditches. Then isone ordinary public latrine and 21 moveable ones. The nightend from the public and private latrines is deposited in the municipal deptite, and thence carted away to a plot of land situated at a distance from the town and there trenched for the private latrines are not always in a clean condition.	Surface cleansing is looked after. The street sweepings and retuse are thrown out of town "nto ditches. There are no public latrines. The neglitical from the private private private private private private private problem of the stabilished by 14the Manuci, pality, and thence cartectes and thrown on weste land at a distance from the inhabited parts of the fown. Both the Civil Surgeon and the Magnetuse condemn the civil Surgeon and the Magnetuse condemn the	Particulars regarding the sanitary condition of the villages in the Sarun district are not yet available, as the Officers of Vaccination Department, whose duty it is to furnish the information, have not yet visited the villages, as vaccination has not yet been introduced into them.	Surface eleansing is attended to, but imporfertly. The surroundings of some of the houses are filltly. There is a large number of hollows and excavations of varians dimension. As experimental lattine was established last year, but it proved a failure, as but few of the people resorted to it. There are 1,160 private privies. They are kept in fair order, and the nights of from them is buried in four trenching grounds cation is very general.	The conservancy arrangements are very defective. Surface conservancy arrangements are very defective. There are surroundings of the houses are very filthy. There are surroundings of the houses are very filthy. There are surroundings of the houses are very filthy. There are properly constructed, and they are, with cife accordance. The private private, of which there are many, have been properly constructed, and they are, with cife accordance to properly constructed, and they are, with cife accordance to properly constructed, and they are accordance in latrines. The nightness from the private Filthy pats and cannot be a disposal of the dead, markets, and slanghter-locates are not quite satisfactory.
SANITARY ESTIMATE OF THE VILLAGES IN EACH UNDER LEADING AND ACCOUNTS.	Water-supply.	Is taken from wells, the water of which is admit. Su ted to be good.	The water supply is taken from wells, of which 6 S belong to the Municipality. The well water is said to be excellent and sufficient.	the villages in the Sarun district are not yet avait yet tyel visited the villages, as vaccination has not yet	taken from 200 wells, 2 tanks and the river Dinndrawati. The wells are, with a few exceptions, very shallow and imperfectly protected and contain impure water. The river is gradualiting up.	Is taken from tanks, wells and a lake. Two tan have been recently excavated calculated supply good water. The lake is resorted to it bathing and washing purposes: seldom for drin ing. There are 8 annurptal and 100 private well set apart for thinking water. Many of them oup in the hot weather, and several of the priva ones are imperfectly protected.
SANITARY ESTID	Drainage.	Drainage does not appear to be good. There Is are three main drains, the outfall of which is into the river Dalia. They are kept clean by coolies.	The drainage is extremely defective. There T say paces and kutcha drains. They lead to the Gogra river and into the Jigma ralla. They are cleaned, when required, by extra volices.	Particulars regarding the sanitary condition of duty it is to furnish the information, have not	The drainage appears to be fair. Most of the farming instead with purcamain streets have been provided with purcamains which work efficiently. Encroachmants and obstructionary are prohibited. It sies, however, customary here to clear out the drains annually before the rains set in, so that at other times they remain obstructed and fithy.	The drainage is yet defective, notwithstanding several improvements which have recently been mad. The drains are much built over, and are generally blocked. The condition of the house drains is in most instances bad.
	Plaints.	26.93	67.4	25.58 25.58	\$	
PRR N PROM	Bowel-com-	33	97.18	11.1 28.3 29.1 14.1 29.1 14.1 14.1	\$	ف
DRATH ULATIO	-mioloff)		21.	9.97 7.02 7.10 8.11 8.93 8.53 8.53 8.53 8.53	- 53 26 26	availab
RATIO OF DEATHS PER 1,040 OF POPULATION PROM	Feast.	1 13.21	- 28	2010 20 20 20 20 20 20 20 20 20 20 20 20 20	- 04	Data not available.
1.0g	-roq-flame	-			21,288	- ^H
	.noitaluqo	13,307	12,483	190,265 302,061 260,385 149,723 284,023 239,072 220,502 221,476 222,619	i i i	
	Name of Circle.	Seven—Tous	Bevilgunge—Tour	Chupra—Raral	Bettish—Town	Mothari – Town
	District.	Sarun .:. Se	Serus	Sarun	Chumparun	Chumparun

Particulars regarding the sanitary condition of the villages in the Chumparun district, are not yet available, as, although vaccination has upen introduced into a creat part of it, the plan of operations followed in the Behar Circle this year did not embrace it, and the villages were not consequently visited by the Officrs of the Vaccination Department.	rer Ganges. There The conservancy arrangements are not quite satisfactory. Surface cleansing is not properly attended to, and the farinking purpose, fluid house refuse is not removed. There are the verticed from polluring the property attended and the farinking there are five urnals, The private privies to which there is a large number, are kept in a very bad state. The might-soil is properly trenched and the trending grounds are well cultivated. Fromiscanous deferenting grounds are well cultivated. Fromiscanous deferention is still carried on to a considerable extent. Improvement is indicated under the heads of disposal of the dead and markets and slanghter-houses.	rese they are pures are arception to this rule. Some of the houses are need they are pures are an exception to this rule. Some of the houses are heir water is used, fation of any others not; but all are deflective in interral fation of any others not; but all are deflective in interral are kept near the house, where they lie for months where they exist the pure. Private hatmon, where they exist, are in many cases composed of welling they. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings. Deflected for many cases composed of wellings.	ich has been feneed Rurtace cleauning is weil aftendedt to, and the fluid purposes, but the Rurtace cleauning is weil aftended to, and the fluid purposes, but the house and kitchen refues is diposed, di het ternching and weils and several condition. I weils and several not satisfactory. There are its ordinary and two movements pollution. Are from pollution. Are private private private mostly purca. The private in the two mit condition. In condition. The night-soil is properly transfeed and two mehrers. The night-soil is properly transfeed and two of the transfering grounds culity and are still being multiplied. The arrangements connected with the dead are very unsatisfactory.	The information for this thans is not yet available.	wells. The former Conservancy entirely absent. The houses are over- lis and bring with recovered and extremely filthy, three being no means of part kutchs and unit in their backyards. There are well-priving in filthy and mouffile.
ondition of the villages in the Chumpar f operations followed in the Behar Cit imation Department.	The drains Is had from wells and the river Ganges. There with rub. are 12 municipal wells. These, and one private quite non- well have been reserved for drains, purposes, hufthey are not sproperly protected from pollution pools and rinnage tion. Corpses and carcasses are cast into the iso in very river at Chandi thannah just below the town.	effected is taken from wells which are protected by para- rillages. Pets generally. In some places they are purcan The soil Where there are tanks their water is used. Where there are tanks their water is used. On the whole the water-supply is not above an any suspicion. See also page 1st of this Report. rainage port.	and the is obtained almost exclusively from wells. There is also a municipal tank, which has been feneed and reserved for arinking purposes, but the draining of a public fairne finds it away into it during floods. The municipal wells and several private once, which are used for drinking purposes, are fairly well protected from political. The rest of the wells, which are used for all purposes, are in a more or less fair condition.		is taken from springs and wells. The former drain from the adjacent hills and bring with it husan excrets and all descriptions of filts. The latter are for the most part kutchs and unprotected, and their water is filthy and insufficient.
Particulars regarding the sanitary control in the agreet part of it, the plan ovisited by the Offiers of the Vacor	The drainage is very defective. The drains are faulty in construction, choked with rubbish, built over in many places and quite non-effective. In fact the whole surface drainage of the town craporates in sludgy pools and private drains. The latter are also in very bad condition.	The general drainage of rain water is effected 15 move or less completely in some villages. There are no side-drains generally. The soil of most of the villages being sandy and the ground unequal in level and containing many generations, there is no effective drainage in them. See also page 147 of this Report.	The drainage is very defective. Several of the drains are blocked, built over, and out of repair, and consequently non-effective.		There are no drains
* 2 2 2 2 2 2 2 3 3 1 2 3 3 3 1 3 3 3 3 1 3 3 3 3	88.4	87.	616	 	ä
¥	#	à	1.47	£.4	
13:38 17:08 17:08 11:38 11:38 11:38	13.69	59.9	14.22	14.63	• 59.93 • 79.93
3 2 2 2 2 22 23	7.	61		-	
340,972 176,748 165,062 140,900 177,682 133,986 191,817 105,088	57,520	81,736	13,568	6,261	12,217
Bettish - Ewrel Motifiari and Segowlie - Ewrel Gobindrungo - Ewrel Bagnia and Moha- Diakka - Ewrel Diakka - Ewrel Keuriah Adapore Mudhubun	Monghyr—Town	Mongbyt-Rural	Jamalpur – Town	Jamspur—Rural	Shaik para – Toeca
Chumparan	Мондруг	Monghyr	Monghyr .	Monghyr	Monghyr

App.	AT']			·			
R THE HEADS OF-	Domestic eleansing.	The houses are ill-rentilated and crowded with inmates at might. The rom-runds and batts of houses are overerd with rubbiah, and cowdung heaps are to be met with in a fermething condition. Defencation is carried on everywhere. "See also page 147 of this Report.	The people, Prahmins excépted, are generally dirty in habits. Some of the houses are sufficiently separated one from another to secure perfation of sir, others not, but most are defective in internal verifiation. Betuse and cowdung are deposited near "the houses till they are required for manuring purposes. Private privies where they exist, are in many cases composed of well-privies. The private privies are cleaned at internals of day." Defrees iton takes places in the pathways, behind and near houses, on waste lands, and in jungles. See also page 141 of this Report.	The inhabitants, Brahmins excepted, are generally filthy in habits. Some of the houses are sufficiently exparated one from another to secure parfathion of air other not; but most of them are defective in internal ventilation. Thied houses are to be not with not letter and eventual are deposited near the houses till they are required for manuring purposes. Private privite, where they exist, are in many case, composed of well-privies, and the surface ones are cleaned at titlerrals of days. Defencation takes place in the path-ways, between houses, on waste lands, or in jungles. See also page 147 of this Report.	See page 147 of this Report.	The houses are ill-rentilated and crowded together and damp. House refuse and cowdung are collected mear them and not removed till the field manuring searn comes on. Frivate latrines, where they exist, are in rany cases composed of well-privies. The surface in rany cases composed of well-privies. The surface tion takes place on the pathways, near houses, on waste lands, and in jungles. See also page 1st of this Report.	The inhabitants, excepting the Brahmins, are renderally filthy in habits. Some of the houses the sufficiently separated one from another to secure perfasion of air, but most of them are defective in internal ventilation. Retuge and cowdung are dejective in the than 111 they are required for manuring purposes. Private priving, where they exist, are in most cases composed of well-
SANITABY BESTMATE OF THE VILLAGES IN RACH CINCLE UNDER THE HEADS	Water-supply.	Is taken from wells which are polluted in various ways. The supply is deficient. See also page 137 of this Report.	Wells supply the water for drinking and other purposes. In most places they are pures and principled by parapets and platforms, but some wells dry up. Where there are tunks and the river, their water is used. Many of the former contain stitking water. See also page 147-0f this Report.	Wells supply be water for drinking and other purposes. In most places they are purce, and purposes in an above ser tanks, they water is utilised. On the whole the water, they water is only whole the water, whother of wells or tanks, is not above suspicion. See also page 147 of this Report.	See page 147 of this Report.	Wells supply the drinking water. In some places they are purch and surrounded by parapets. There are tanks also in some villages. On the whole the water is not above suspicion. See also page 147 of this Report.	Well supply the water for drinking and other purroses. In most places they are purces and protected by parapets and ulatforms. Where there are tains, their waters is utilised. On the whole the water, where was not a bove suspicion. See also page 147 of this Report.
SANITABY BST	Drainske ,	See page 147 of this Report	The drainage of rain-water is offected more or less completely in g. me villages. In others the soil being sands, the ground unsavel in the soil being sands, the ground unsavel in more are no side is no effective drainage. Because the side drains generally. See also page 1st of this Report.	The dramage of rain water is effected more or less or opletely in some villages. In other the soil being sandy, the ground unequal in level and containing many excavations, there is no effective drainage. There are no side drains generally. See also page 147 of this Report.	See page 147 of this Beport.	The drainage is defective. The soil being sandy the ground surface unequal in level, and excavations existing, there is no effectual drainage. See also page 147 of this Report.	The drainage of rain water is effected more or less completely in some of the villages. In others the soil being saddy, the ground unequal in level and contaming many excavations, there is no effective drainage. There are no sidedrains generally. See also page 147 of this Report.
900,	Bowel-com- plaints,	ž,	1.05	24	\$	Ę.	15
IS PER N FROM	Сроюта.	Şi Şi	09.	ફ્રે	ક	ş	25.
P DEATH	Fever.	20.02	51.51	78.13	25.19	29-87	62.93
RATIO OF DEATHS PER 1,000 OF POPULATION PROM-	.xoq-Qame	70.	7	8	5	5,	ğ
	Population	186,963	166,263	365,934	148,079	203,633	378,794
	Name of Circle.	Shaikpara including Lukhiserai – Rural.	Surajeurrah including Burnarpur— <i>Rural.</i>	Goeri including Khagering—Rural.	Kharakpur-Rural	Teghra—Bkra?	Beguserai-Bural
	District.	Monghyt	Мопдћут	Monghyr	Monghyr	Mongdyr	Моперут

		and before the property of the property of	See pages 147 and 148 of this isoport.	1.18	<u>e</u>	19-75		88. F3.	Sultangunge-Rural	Bhagralpore
	See pages 147 and 148 of this Report.	See pages 147 and 148 of this Report.	See pages	.13	\$	21,36	\$	185,328		Bhagulpore
	See pages 147 and 148 of this Report.	See pages 147 and 148 of this Report.	See pages 147 and 148 of this Report.	.18	න	02.03	200.	\$62,678	. Mudehpurs—Exfal	Bhagalpore
	The houses are crowded together and their surroundings are filthy. Refuse and crowdung are accumulated near houses. The dead are thrown into streams. See also pages 1st and 1st of this Moport.	water collects is taken from wells, tanks and the river where it also pages 147 exists. When the river is dry, clear water is obtained by digrating into its bed. The sides of some tanks have been rised to prevent surface drainage, but their water is polluted by bathing. See also pages 147 and 148 of this Report.	Drainage is defective. Rain and causes dampness. See and 148 of this Report.	213	89	86.83		134,227	Banks-Rural	Blagulpore
	The houses are ill-rentilated, crowded together, and over- crowded as regards inmates. The villages are unclear, Behns, is accuratiated ill required for manure. No conservancy. Nuisances are committed every where. See also pages 147 and 186 of this Report.	See pages 147 and 148 of this Report.	Drainage is defective. Excavations are numer. See pages 147 and 148 of this Report. Report.	\$3	į.	- F2		192,237	Colgong—Baral	Bhagulpore
	See pages 1s7 and 148 of this Report.	See pages 147 and 148 of this Report.	See pages 147 and 148 of this Report.	ģ	ş	19.53		100,579	Kotwali or Bhagulpore	Bhagulpore
, CAIV	The conservancy arrangements generally are fair. Surface cleansing is attended to, but the stress and among an extended to to, but the stress and among are sweet. Many convexations exist. There are 105 public latrines, 3 of corrusated iron, 36 of masoning and 97 of mason. They are kept in fur order. The private latrines in two wards are under muncipal management; the rest are attended to by private melters. The night-soil is trenched, but in rather deep pita. A gart of one of the trenching grounds is under cultivation. There are in them all over the town. No arrangements exist for the disposal of the choices and infectious disease dead.	Is taken at present from the river and wells. There are an minicipal and many private wells, but the quality of the weter is uno good. There are four tanks for domestic purposes. A flerend water-supply scheme is being carried out, and will shortly be brought to completion.	The natural drainage is good except in the Jow parts. The drains are kept in good order, but they are deep and obstructed in owne instances. Almost all the house-drains empty into vats within the premises, the contents of which are removed by the municipal meliters.	82.4	4.57	18 81	:	57,463	Bhagulpore— <i>Town</i>	Bhagulpore
	The people are unmindful of personal cleanliness, but the weepings and house refuse, sithough accumulated in the courtrands, are burnt at interrals. See also page 1% of this keport.	See_page 147 of this Report.	See page 137 of this Report.	ä	<u>ş</u>	76.03	20.	109,540	Chakye including Burharwa - Rarel.	Monghyr
	٤	Information regarding this thana is not yet available.	ı.	13	. 8	87.12	300.	190,563	Jamui-Raral	Monghyr
	The houses are crowded together, ill-rentilated shd crowded with imma'ss at night. The people are flithy in babits. Bribish, cowdung, and sahes are heaped up near houses. The pathways are flithy. See also page 187 of this Report.	Is taken from unprotected kutcha welss, which are I used for all purposes. See also page 1s7 of this keport.	Drainsge is defective. The reads have no I drains. See also page 147 of this Report.	\$	10.	17.52	150	122,389	Sekundra in Beguse- rai - Esrad.	Monghyr
	privies and the surface ones are cleaned at interrals of days. Defreesion takes place in the pathways between the houses, on waste lands, or in jungles. See also page 147 of this Report.									

	,		1,000 C	ATIO OF UP POPU	RAIIO OP DEATHS PER 1,040 OF POPULATION FROM-	PER FROM-	SANITABI ESTI	SANITARI ESTIMATE OF THE VILLAGES IN EACH CIRCLE UNDER THE HEADS OF	IR THE HEADS OF-
District.	Name of Circle.	Population.	.xoq-llam8	Fever.	Chelorn.	Bowel-com-	D тана g е.	Water-supply,	Domestic cleansing.
Bhagulpore	Bihpore-Rural	86,403	<u> </u>	30.22	7.		Information for this thans is not yet available.		
Bhagulpore	Roopole - Rural	299,049	<u></u>	19-74	1.49	13	Information for this thans is not yet available.		
Bhagulpore	Partabgunge—Rural	153,272		06.02	\$L.	ي.	Information for this thans is not not available.	•	-
Bhagulpore	Bungaon-Bural	148,560	3	13.05	83	95	Information for this than is not yet available.		•
Вракпроте	Umerpore-Zurai	268,548	10.	18.18	99	! •	Drainage is defective. See also pages 147 and 148 of this Report,	is bad and polluted. See also pages 147 and 148 of this Report.	Conserrancy absent, and houses insufficient and bedly ventilated. See also pages 147 and 148 of this Report.
Bhagulpore	Kotsreah - Rural	77,644	3	66.08	50	1 %	Information for this thana is not ret available.		
Purneah	Purneah-Zown	15,016	92,	**************************************	2.2	93.8	The drsinage is defective. Almost all the drains are kutchs, and the soil being sandy sheals are quickly formed which with weeds obstruct the drainage channels. Fishing weirs also prom-te obstruction.	Is taken almost exclusively from wells and from the river Somes by those who live near it. There are tanks also, but they are in bed condition, being overgrown with regelation. Of the wells, the four belongang to the Municiusity and four to Government have been protected and reserved exclusively for drinking purposes. The private wells are immunerable, about every holding harms one. They are more or less protected from pollution, and are used for all purposes.	The conservancy arrangements are very unastisfactory. Surface cleansing is not properly attended to and much rubbish remains unadisposed of. There were 10 public latrines which are kept in scod order. There are many private latrines. They are ill-constructed. The many private latrines. They are ill-constructed. The might senior of the public latrines is trenched near them: but that from the private once is thrown into jungles outside the town. There are innumerable pits and excavalions. The arrangements connected with the disposal of the dead are unsatisfactory.
Purnesh	Purneah-Rural	138.704	200.	17.41		41.	Information for this thans is not yef svailable.		4
Purneah	Kusba Amour – Zural	124,869	ē	20.74		800.	Some villages are on high, and some on low ground. The latter are liable to mundation. See page 134 of this Report.	Is taken from rivers and wells. The former are promiscuously used and their banks reserted to for deforcatior. Some of the latter get dry during the hot weather; some are deep; and some have raised mouths. See also page 134 of this Beport.	The houses are crowded together and ill-ventila Some have dry floors, others are damp, necessitat sleeping on machans. No conservancy. Sweepings refuse are thrown near houses, and cow dung is hose in front of them. The cattle are kept in the or pounds, Deferention is carried on in the nearest flow and in some places on the footpaths, which are otherwise flithy. The dead are thrown jnto the rigand dead cattle near houses in many places. See page 134 of this Report.
Purneah	Damdahs - Rural	109,391		13.78	124		'01 See page 134 of this keport	See page 134 of this Report	See page 134 of this Report.
Purnesh	Gondwars and Carra-	123,945	:	15.75	9.	\$	See page 134 of this Report	See page 134 of this Report	See page 134 of this Beport.

Purnesh	:	Arratiab – Rerat	200,012	S	18-60	9 .	\$	Some of the villages are situated on high ground, and are not inundated. See also page 134 of this Report.	Is taken from pucca and kutcha wells, which are polluted in every way. In some places river water is used, but bathing, washung, and the steeping of hides are carried on in them, and this bahks are used as latrines. See also page 13s of this keport.	Same as in Kusba Amour, but in some villages the footpaths are not used as latrines, and the dead are thrown in "dhara." See also page 134 of this Report.
Purnesh	1	Matiari—Burol	94,115		90.73	90.7	.15	As in Kusba Amour	As in Kusha Amour	As in Kusba Amour.
Purneah	ł	Banigunge—Bural	107,552		28.28	3	99	As in Kusba Amour. Some of the villages are water-logged throughout the year.	As in Kushba Amoar. The water of some of the pucca wells is good.	As in Kusba Amour; but the dead are cremated on banks of tanks.
Purneah	:	Kissenganj-Raral	158,100	ģ	22.03	5.08		See page 134 of this Report	See pare 134 of this Report	See 2spg. 134 of this Report,
Purneah	•	Bahadurganj-Rara!	196,142		11.82	8	200.	As in Kusba Amour	As in Kusba Amour	As in Kusba Amour, but in some villages cattle dung and reluse are removed to places distant from the villages, and the dead are buried on the banks of tanks.
Purnesh	:	-Kalisganj-Eural	877,059	400.	58.03	å	91.	See page 134 of this Report	See pace 134 of this Report	See page 134 of this Report,
Purnesh .		Kodwa and Saifgunge Eural.	184,275	\$	18.84	ģ	10.	Drainage is defective. There being no sidedrairs, water accumulates here and there. See also page 134 of this Report	Is taken from kutcha wells, open to every description of pollution. See also page 134 of this Report.	The house floors are in most cases damp. Sweepings are thrown close to, and cowding heaped in fr-nt of, houses. The nearest fields are resorted to for defencation. See also page 134 of this Report.
Purneah	:	Balrampur—Raral	115,051	1	02.03	61.	ST.	See page 134 of this Report	See page 134 of this Report	See page 134 of this Report.
Purne a		Manihari—Beral	54,456		15.75	13.		See page 134 of this Beport	See page 134 of this Report	See page 134 of this Report.
Kedah*	•	English Bazar—Town	19,430		7.32	80.	à	Drainage is defective. There are several purea and kutcha drains. Some of the former are badly constructed and deficient in level, without proper fall, and obstructed with rubbias so that their contents stagnate and decompose. The kutcha drains are also deficient in level and obstructed. Almost all the drains level to tanks, ponds, pools and deep ditches in thickly populated localities, and eighbare their contents into them the rains.	Is taken from the river and more or less filthy tanks and wells. There are tew Government tanks which are protected and into which river water is let during floods through the purca drains. The private tanks are generally situated near house drains well-privies, middens, &c. The water leads are mostly unprotected, receives. The river water become filthy and purposes. The river water become filthy and middy during the dry and rainy seasons respectively. The water of one of the wells is good.	Burface cleansing is not completely altended to, only the main streets being swept to daily and the lanes, &c. once a week. The find ethese of private houses run into the municipal drams to dry up or decompose. There we 30 public latrines, but-on account of the extremely fifthy condition in which they are kept they are not much used, the people preferring to defocase elsewhere and when they do go to them they often aquat outside and when they do go to them they of the nagust outside removed at the fancy of the mehter. The night-oil when removed at the fancy of the mehter. The night-oil when removed from the public latrines is trenched in any convenient place. The town is fall of lithy pits and offensive lanks. The Mahomedans bury their dead in mango groves or in their house compounds. Some of the very poor low castes cast their dead into the river.
церјен 2	:	English Bezar and Bholabat—Rural.	72,615		12-50	ន់	1	See page 134 of this Report	See page 134 of this Report	See page 18s of this Report.
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* The general report regarding this district is as follows:-There is no drainage system and no conservancy. Defocation is promiscuous, including on banks of rivers, the foscal matter being better off, but even the river is contaminated in many ways. The tanks receive surface drainage with organic impurities; the bhils dry up during the hot weather when it neufficient in quantity and worse in quantity.

			RATIV OF F	OPULAT	RATIO OF DEATHS PRE 1,000 OF POPULATION FROM-	1,000 K-	SAFITARE BE	SABITARY BUILDANE OF THE VILLAGES IN RACH CIRCLE UFDER THE HEADS OF-	RB THE HEADS OF-
District.	Name of Circle.	-noitaluqoA	smell-por.	Ferer.	Oholora,	Bowel-com-	Drainage,	Water-supply.	Domertic cleansing.
Kaldab	Old Maldah — Tver	***		Data not available		i	Drainage is very defective. The long low I ridges between corresponding high strips of land, which form a distinguishing feature of this kewn, are the principal outlets of drainage. In the places where the levels have been interfered with by the taking of earth water collects and forms foul cess-pools.	Is taken from the river Mahananda, the Dahamarkunda, Daha, jini, tanks and wells. Those tanks which are flushed annually by river water are used for miscellathous purposes. There are several protected wells which are used solely for drinking, and the rest of the wells are in a more or less satisfactory condition. Some of the private tanks are very objectionable.	The conservancy arrangements are very unastisfactory: strictly speaking there, are none. Rubbish, &c., lie unremoved, street sweepings are thrown into the nearest convenient corner or unoccupied site. Cattle dung is stored in the compound of houses. There are no public latrines. About half of the people have private privites which are so constructed as to disabarge their contents into the big natural drains where they remain till removed by natural forces. Promiscuous defocation prevails to a large extent. There are many deep hollows. The arrangements relaring to the disposal of the dead are very unastisfactory.
Kaldah	Maldah—Rwat	\$0,894		17.53	17	1	See page 134 of this Report.	See page 134 of this Report.	See page 13t of this Report.
Makdah	Gazole-Rural	54,317	-	21.22	9 .	F	See page 134 of this Report,	See page 1% of this Report.	See page 134 of this Report.
Kaldah	Ratna or Gargoriba-	80,024	i	18.88	68.	\$	See page 134 of this Report.	See page 134 of this Report.	See page 134 of this Report,
Maldah	Kharba-Rural	103,051		16.44	£.	I	See page 134 of this Report.	See page 184 of this Report.	See page 134 of this Report,
Maldah	Gomastapur-Rural	52.810		15.39	10.	80	See page 134 of this Report.	See page 134 of this Report.	See page 134 of this Report,
Maldah .f.	Kaliachack Rural	115,693	800.	11.22	ង	-02	See page 134 of this Beport.	See page 134 of this Report.	See page 134 of this Report,
Maldah	Shibgunge—Baral	102,162	606.	11.48	600.		See page 134 of this Report.	See page 134 of this Report.	See page 13s of this Report,
Maldah	Nawabgungo-Eural	66,453		37.11	.13	.10	See page 134 of this Report.	Seë page 134 of this Report.	See page 134 of this Report,
Southal Pergun-	Deoghur—Zown	8,005	ş,	18-36	674	174	Natural dramage is excellent. The drains are well looked after; but som of them are insufficient in capacity.	Is taken from tanks, wells, and a hill-stream. One tank has been set apart for drinking purposes, and some of the wells contain pure and wholesome water. The water-supply is deficient in quantity for the requirements of the town.	Most part of the houses are brick-built, but they are covered at objective and ill-remitised. The conservancy arrangements are fair. Surface cleaning is attended to, and the sweepings and rubbish properly disposed of. Many pits and earwarions enist. There is crip one public lattine, but it is not used owing to its condition built attine, the rate of the private lattines is also bad. Promiscuous deferation is largely carried on. The night-soil is removed beyond manicipal limits and thrown away.

Southal nahe.	Pergun-	Deorhur and Jamtara (Mathupur and Sarath)—Esrot.	389,665	256	15.26	ë	35	See page 148 of this Report.	Is taken from wells, and is said to be good. See also page 143 of this Report.	See page 148 of this Report.
Southal rahs.	Pergun-	Dunka - Baral	363,186	500	8.41	10	1.01	See page 148 of this Report.	See page 148 of this Report.	See page 148 of this Report.
Southal naths.	Pergun-	Rajmebal (Sahebgunge Burera) – Raras.	\$53,825	7.	6-61	10.	ģ	Drainage is defective and obstructed in parts. The fround being timequal in level, impedes free surface drainage of rain water, which consequently accumulates, and, by sub-soil soakage, renders the soil damp, See also page 148 of this Report.	Drinking water is taken from tanks which are also used for bathing and other purposes. Some of them we well protected, but many are filthy. In some villages there are excravation, or small tranks, containing foul and unwholesome water caused by decomposing vegetation and surface drainage, which are the only sources of water for drinking and domestic purposes. Where a river runs, its water is drunk, but it is poiluted by bathing and washing cuttle, and defocation on the river banks, See also page 148 of this Report.	The holless are mostly crowded, which precludes free perflation of air. There are pits abelind the houses in which sewage is deposited and decomposes. Sheep, is pigs and goals are lovated in the bed-roomer. Refuse and cowdung are accumulated near the houses and never removed except for manure. Many villages abound in juncle. Defocation is carried on in banboo grevres, ejungles, or in the outstirts of the villages.
Southal	Perkun-	Schebgunge—Zowa		Data no	Data not available.	98		The drainage is satisfactory. There are both pueca, and kutcha drains, which are maintained in good order.	Is obtained from thefriver Ganges, tanks and wells, The municipal tank is in a bad condition, and civiles, extit, &c., are washed in it, and the innumerable private tanks are generally filthy. Sixteen of the wells have been protected and reserved for drinking purposes, but they dry up in the hot weather, not being sufficiently deep.	The conservancy arrangements are not quite satisfactory. Surface cleansing and the disposal of house and kitchen retuse are properly attended to. There are three latrines for the general public, and two have been provided by the Railways authorities. They, as well as the private privites, are in a satisfactory state, but not miscuous defocation is still carried on The night-soil is thrown into hollows at the foot of the hills. There are many pits and water-holes about the fown.
Southal Perrumaha Pakonr – Bare	Frances	Pakonr (Maßespur) 	204,919	86	11.81	æ.	17-40	Drainage is defective. There are pits and excavations, and the ground surface is unequal in level. See also page 148 of this Report.	Is generally taken from tanks, the water of which is unwholesome, as it is polluted in several ways. Some villages obtain their water from wells and some from rivulets. Well-water is said to be good. See also page 143 of this Report.	The houses are substantially built, and, although situated on raised ground, are darp. They are lil-remissed and cornwded together, and refuse is accumulated near them till required for manure. No conservancy. Deforsation takes place on the pathways and other places. On the whole the villages inhabited by the Southals are not so flithy as the others. See also page 148 of this Report.
Southal Pe	rgramshs	Sonital Pergunnahs Godda (Mobagawa and Podalya) Eural.	348,463	5	13.14	9.	138	The natural drainage is good, as the land is high. But as there are exceptions and the pathways are not supplied with drains and pare not properly levelled, the drainage is impeded. Where the land is low, water accumulates. See also page 186 of this Report.	Is taken from wells, some of which are pueca and some protected from pollution. Their water is considered good. Where a river exists, its water is used, but dead bothes are thrown into it. In a few place, the water is had by digging into the bed of the river, and this water is good and clear. See also page 146 of this keport.	The soil is sandy and abserbs and retains much moisture. In houses are mostly crewded, preventing free perfusion of air. Jungle shounds in some of the wilages, then of air. Jungle shounds in some of the wilages, in the court, yards of, and near the houses. In some of asses the catile are located in the sleeping-rooms, Detecation is carried on, on the fields or waste land, in juncles at the outskirts of the villages, even on the path, ways. The dochtals usually keep the bones of their dead in their house, until an opportunity offers to consist than to the Damuda river. See also page 148 of this Report.
		Annual Control of the								

			BATTO 0	P DRAT	BATIO OF DRATHS PRE 1,600 OF POPULATION PROM-	<u>6</u> 1	SANITARY	SANITARY BETIMAIR OF THE VILLAGES IN RACE CIRCLE UNDER THE HEADS OP-	NDER TER HEADS OF
District	Name of Circle.	Population.	.xoq-liam2	Kever.	Cholera.	Howel-com- plaints.	Drainage.	Water-enpply.	Domestie cleansing.
Cuttaok*	Cuttack — Towns	3	\$	28.	11 11 11 11 11 11 11 11 11 11 11 11 11	1.13	Drainage is on the whole fair, excepting that when the Kutjur river is in flood the discharge of the main drainage, which empties drainage is repped, and the town drainage is braded bars. The house-drains are generally fifthy.	Drinking water is taken almost exclusively from wells, tank and river water lemguaed for hathing washing of clothes, &c. The water-supply runs abort in certain levalities when the river runs yery low. Most of the tanks are in a filthy state. But the wells, which are very numerous, a most teerey holding having one, are more or less protected from pollution.	The conservancy arrangements are in several respects very anjectionable. Surface cleansing is properly done and the severpings, i.e., are utilized in filling up hollows and accavations. The bouse and kitchen fluid retuse it, however, disposed of somewhere within the premise are 25 public throad of somewhere within the premises are 25 public throad of more of these structures are required. There are 8 public utinals which are in fair order. The conference of the private privite as the Promiseuous defencation is very fargely current on. The night-soil defencation is very fargely current on. The night-soil crem all the public privies and several of the purvate ones is trenched in deep circular pits, but that from the remaining private privies and several of the purvate and yellow in the remaining private privies in either burited in the sand yellow ones is return the remaining private private and shauding in some ob-cure place. The arrangements under the houses are on the whole fair.
Cuttack	Cuttack—Zural	156,836	10	25	94 57 89	2	The sites of the villages differ, some being on high and some on low ground. See also page 180 of this Report.	is 'aken from rivers, streams, tanks and wells. Its quality is good generally, but in very many places it is highly polluted. See also page .60 of this Report.	In some villages the houses are damp and defective in ventilation. Others axain are sufficiently senarated one from another to admit of ventilation. In some places juriel abounds. There is no system of conservancy anywhere, but the habits of the people are generally cleanly. The averagings and refuse, atthough removed from within the premises, are allowed to accountate outside. In very many places the covaction are situated too close to the houses, and coveding is met in heaper close to them. See also page 160 of this Report.
Cuttack	Jajpore Toers	11,233	İ	27.7	87.8	4.36	discharge is no systematic drahase. The drains discharge into the river. Their condition is said to be good, but as there as no regular establishment to look after them, excepting annually by hired coolies, they can hardly be in efficient working order stall times.	is taken from wells and the river. The supply is said to be good excepting during the rains, 16 of the wells, some of which are puon, belonging to the Municipality.	Surface cleansing is partially attended to. The principal streets are swoot dally; the lance occasions by The sweepings and garbage are employed in faith g up holes and depressions. There are no public lattices. Defecetion as carried on in the bed of the river, jaugies and on waste lands in and near houses. There are no well-prives The dead are interred in the compounds of houses and in the banks of the river.
Cattack	Angool - Toess		Data no	Data not available.	ite.		See page 162 of this Report.	See page 162 of this Report.	See page 163 of this Beport.
Cuttack	Jajpore - Bural	239,503	9	e .10	3.66	1.39	See page 160 of this Report.	See page 160 of this Report.	See page 160 of this Roport.
•									And the fact that the state of

Pine Magnetrate reports that the people of this district are very backward in matters of sanifation. They are wedded to habits which are not conducive to general cleanliness in their villages, and will not result by the than up.

Cultack	Kendrapara—Town	15,097	ş	3	8	818	There is no drainage system. The readside drains are connected with the jivils, which discharge the water into the fields beyond the town, which is thene drained back into the Gobra river, which runs through the town. In consequence of this no artificial drains are required.	Is taken from the Gobra nullah, the canal and tank. It is said to be good, and sufficient for both drunking and other purposes. In the hot weakfort, and before the canal closes for repairs, water is let into some of the tanks.	Surface eleansing is attended to, but not sufficiently. The sweepings are utilized in alling up holes and depressions, and the garbage is buried. There are no public latrines, and defercation is promiscuous. The strangements connected with the disposal of the dead are astinknetory.
Culturit	Kendrapara—Rurai	175,323	\$	S. 8	4.18	1.30	See page 161 of this Report	See page 161 of this Report	See page 161 of this Report.
Cuttack	Aul-Rural	91,015	5	11.81	17.8	8-62	See page 161 of this Report	See page 161 of this Report	See page 161 of this Report,
Cuttack	Salepar-Rural	249,979	88	7.	77.2	\$0.5	2.04 See page 161 of this Report	See page 161 of this Report	See page 161 of this Report.
Cuttack	Tirtol-Eural	188,677	50.	3.1	1.83	200 200 201	See page 160 of this Report	See page 160 of this Report	See page 168 of this Report.
Cuttack	Jagatsingpur—Rural	215,001	97.	7.19	136	\$4 54	See page 160 of this Report	See page 160 of this Report	See page 160 of this Beport,
Cuttack	Patamundai - Bural	100,401	.18	20-21	8.16	9; 2	See page 161 of this Report	See page 161 of this Report	See page 161 of this Report.
Cuttack	Dharamasais—Rerai	248,762	.16	\$9.6	85.50	1.98	See pages 160 and 161 of this Report	See pages 160 and 161 of this Report	See pares 160 and 161 of this Beport.
Cuttack	Banki - Rural	56,900	3	87.8	33	18.1		Information for this thana is not yet available.	· ·
i i	Puri-Towns	21,784	\$	*	81.83 81.83	9 4.	The draimae is very defective. A scheme for improving its un abeance, and the few surface street drains are ketal chean. The drains being few in sure her, the reads serve the purpose of drains during the rains.	Drinking water is taken from wells and tanks. The latter, being held speered, are also used for bething and everenonial purposes, and during festivals a great deal of rice, flour, fruits, leaver, turmere, &c., are thrown into the water, thus contaminating it inkly. On chemical analysis the water of both tanks and well were pronouned unft for druking. He unprovement of the water-supply is under consideration.	Surface cleansing is attended to properly. There are 21 public latriues. The sake of the privies in the mative portion of the town is very deplorable. Hany of the proving the property of the property perform their work properly, so that the night soil is allowed to securniate for a very long night soil is allowed to securniate for a very long time. The night-soil from the private prives which have been placed under municipal management, is trenched, but in rather deep puts Some of the proper condition of the dofenge-houses maintained for the pillers with which we reserve that the proper central point of the dofenge-houses maintained for the pillers with the pillers with the property of the pillers with the property of the pillers with the point of the dofenge-houses maintained for the pillers with the property of the pillers with the property of the pillers with the pillers with the pillers with the property of the pillers and the property of the pillers with t
Pari	Puri—Burat	197,340	63	4.8 89.8 89.8	8.4 3.43	F. 3	Particulars regard	Particulars regarding the sanitary condition of the villages in these thanas are not yet available.	
k 4	Khurda—Rarat	349,478	11.	17.16	1.20	E .	Bome of the villages are situated on faifly high ground with good natural drainage, some on low with defective drainage; but nowhere is there a regular system of drainage. See also page 161 of this Report.	Is taken from wells and tanks, and in some place from sprincs and the river. In general, it is goo and sufficient, but in some villares it is so bad a for cause statenes, the tanks being used for a nurposes, and the wells being politiced by mwanderanser, and the wells being politiced by mwanderanser, and the wells being politiced by mwanderanser, and falling leaves. See also page 10 of this keport.	The habits of the people are fifth; in some places of cleanly. The ventilation of the houses is good from the houses in some places are crowded feedered, dank and surrounded by junzle. Conservancy set, Nights soil, cowdung and returns are based mare blaces. With few exceptions, the dead are burned and cremated outside the willages. See also page 161

			RAT'	Poper	RATION OF DPATHS PER 1,000 OF POPULATION FROM-	BOK-	SANITARY ES	SANITARY ESTIMATE OF THE VILLAGES IN RICH CIRCLR LADER THE HRADS OF-	er the hrads of—
District,	Name of Circle.	Population.	Small-por.	Fover.	.влоіона.	Bowel-com- plaints.	Drainage,	Water-supply.	Domestic cleansing,
Puri	Gepe-Rural	116,167	60.	6-03	6.60	2.10	Particulars regarding the sanitary condition of th	lars regarding the sanitary condition of the villaces in this thana are not yet available.	
Pari	Banpur - Raral	126,837	51	24.7	8.68	61.9	Drainage is defective generally, but fair in some places. The roads of some villages have sidedrains, which are not obstructed. See also page 102 of this Report.	See page 182 of this Report	The villages are situated on low ground. The houses are fairly well ventilated generally. but many are badly rentilated, and some are subject to damp. The habits of the people are cleanly. In some places the dead are buried close to villages. See also page 163 of this Report.
Balaaore	Balsacro- Tores	20,265	64.	St. 8	7.50	7.15	The natural drainage is fairly satisfactory. I good system of drainage is being stready. If progressed with, Till this scheme is completed the lodament of water in the town, due to its irragular surface, will continue to dissupear slowly by percolation and evaporation.	Is taken from the river, tanks and wells. Four tanks and one well, containing good water, have been reserved for drinking purpows. All other sources are impure, and the water-supply is inadequate.	Surface cleansing is looked after carefully. This town is said to be the cleanest seen in India by the Magistrate, but the Civil Surgeon says that its sanitation is defective in alldetails, particularly with researd to draining. There are only four public latrices. They are cleaned four to six times a day. There are eight urinals in the bazar and on the ugar road. The private privies see kept in an inoffensive condition. Premisenous deducation is very general. The uight-soil is trenched, land. Batters relating to the disposal of the deed, markets, and slaughter-house require to be better attended to.
Balasore	Baisere—Earol Batta—Earol Jellevore—Earol Sorah—Earol Bainpal—Earol Brintrak—Earol Brintrak—Earol Brintrak—Earol Dhanquagar—Earol Chandballi or Moto—Earol.	87,480 71,186 55,108 197,508 88,528 189,21 17,534 132,21 132,21	***	797 634 10:31 90:9 90:22 23:64 71:71	81.8 14.6 14.9 14.9 14.9 15.9 15.9 15.9	5.81 810 823 8421 8421 8437 8433	Particulars regarding the sanitary condition o	iculars regarding the sanitary condition of the villages in these thanss are not available, as they were not visited this year.	they were not risited this year.
Resertingth	Hazaribagh—Tows	15,306		F6.9	8	\$4 \$4	The natural drainage is good. The drains are not kept in good condition during the rains. The main drain walls are not in good condition. The drainage of the gowalls quarter is non-effective.	Is taken from public and private tanks and from private wells. The water-supply is on the whole good, particularly that taken from the aublic tanks, which are protected from pollution.	Surface cleansing of the streets is attended to, but not that of the lanes, the establishment being insufficient. The outlying villages are in bad condition. The public insufficient, and the private ones are not lattices are insufficient. Bromiscuous deforcation takes place. The houses in the bazar are haddly constructed and ill-ventilated. The arrangements, for the disposal of the dead are good, excepting that no provision exists with regard to the choisers and small-pox dead. The offsel of the cattle slaughtered is thrown into pits.
Hazaribagh	Hszaribagh—Rarol	81,718	• !	17-27	5 8	š.	See page 139 of this Report	See page 139 of this Report	See page 139 of this Report.
Hazaribach	Chatra-Touff		Data not	ot available.	sble.		See pages 142 and 143 of this Report	See pages 143 and 143 of this Report	See pages 142 and 143 of this Report.
Hanribagh	Echak—Town	·	Data not	ot available	rble.		See page 141 of this Report	See page 141 of this Report	See page 141 of this Report.
Hararibagh	Chatra—Bural	64,018	i	94.13	i	1.10	See page 140 of this Report	See pare 141 of Mis Report	See page 141 of this Report.
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Hazaribagh	Gawan- Raral	83,375	ē	12.87		:ê	See page 140 of this Report	See page 140 of this Report	See page 140 of this Report.
Hazaribagh	Kashmar-Rurol	47,094		17.38	92	16.	Particulars regarding the sanitary o	Particulars regarding the sanitary condition of the villages in this thana are not available, as they were not visited this year.	able, as they were not visited this year.
Hazaribagh	Chowparun-Rural	70,437		10.83	%	<u>ئ</u>	See page 140 of this Report S	See page 140 of this Report	See page 140 of this Report.
Hasaribagh	Bagoda—Rural	59,305	1	16.60	.	- SS	See page 140 of this Report S	See page 140 of this Report	See page 140 of this Report.
Hazaribagh	Simuris-Rural	37,029	1	24.27	i	<u> </u>	1	See page 141 of this Report	See page 141 of this Report.
Hazanbagh	Giridhi - Toecs		Data n	Data not available.	ble.		See pages 141 and 142 of this Report S	See pages 141 and 142 of this Report	See pages 1st and 1st of this Report.
Hazaribagh	Pachamba or Giridhi	98,097	ij.	17.12	FO.	1.30	See pages 139 and 140 of this Report S	See pages 139 and 140 of this Report	See pages 139 and 140 of this Report,
Kazaribagh	Juggeswal—Zarol	63,593	10.	n.12		is	See page 139 of this Report.	Is taken from kutcha wells, which are used for all purposes, and their surroundings are fitthy. See also page 139 of thus Report.	Some of the villages are surrounded by jungle, and are in an abominably filthy condition. Jute is steeped in shallow pools of water and in small streams. See also page 138 of this Report.
Hasaribagh	Barhi-Raral	53,654	10.	13:79	7	is	Particulars regarding the sanitary co.	Particulars regarding the sanitary condition of the villages in this thans are not available, as they were not visited this year.	ole, as they were not visited this year.
Hazaribagh	Dumri-Reral	68,685	10.	\$0.13	5 0.	\$	See page 141 of this Report	See page 141 of this Report	See page 141 of this Report.
Hazaribagh	Kharakdiha— <i>Rural</i>	150,545	•	8:30	Ď.	13.	See page 140 of this Report S	See pace 140 of this Report	Here the filth is swept into hears or into holes in the ground, and subsequently removed and used as manure. See also page 140 of this keport.
Hazaribagh	Koderma-Bural	73,902	90.	10.36	10.	7.	Particulars regarding the sanitary condition of th	us regarding the sanitary condition of the villages in this thans are not available, as they	as they were not visited this year.
Hazaribagh	Huntergunge-Rural	6 6,964	ē.	89.23	80.	- 5	See page 141 of this Report S	See page 141 of this Report	See page 141 of this Report.
Hazaribagh	Ramgarh—Bured	3.8 s.T.	. !	17.49	\$	86 7	The natural drainage is good, the villages I being situated on elevated ground. See also page LE of this Report.	Is taken from kutcha wells, daris, shallow tanks, bandhs nullas, and river, all more or less polluted. See also page 139 of this Report.	The people are filthy in their habits. The houses are ill. ventilated, and their surroundings diffty. Cow-dang and house-teines are acquantiated everywhere. We conservancy. Defectation is promiserous. See also page 139 of this Report.
Hararibegh	Tandwa or } -Eurgi	65,780		\$7.08	89.	**	The natural drainage is good, the houses It being situated on elevated ground. Ege also page 138 of this Report.	is taken from pucca and kutcha wells, daris, bandhs and river. The river is pollited by washing of clothes and cattle, and burning of the dead on its banks. The bandha dry up. See also page 139 of this Report.	The houses are ill-rentilated and crowded together, but some tile-rooled houses are to be met with. No conserrancy. Cattle are kept in compounds of houses, and their dune as well as the sweepings and houses are some as stored in pits outside of the villages. There are some well-privies to be met with. Defocation is earlied on the fields. The dead are cremated on the house, See also page 139 of this Beport.

			RATIO OF P	OF DEAT	RATIO OF DEATHS PRE 1,0-10 OF POPULATION PROM-	1,0.0	SATILLE SS	SANITARY ESTIMATES OF THE VILLACES IN EACH CIRCLE UNDER THE HEADS OF	- 10 STEEN LEVER OF -
District.	Name of Girele.	-Moitalngo¶	Small-pox.	Fover.	Cholera	-mos-lewofl shuisiq	Drainage.	Water-supply.	Domestic cleansing.
Lobardugga	Ranchi—Tosca	18,443		92.71	20.	45 50 64	The natural drainage is good, but the drains, which, with few exceptions, are kutcha, are not sufficiently attended to, and have been quite overgrown with grass and weeds, and co.nsequently much obstructed.	Is taken from wells for drinking, and from tanks for bathing, washing clothes, and other purposes. The well-water is very pure and of good quality. But the prover classes use wells, drains, and perines for all purposes. In the hot season the wart of water is much felt, as the wells, although numerous, dry up.	The conserrancy arrangements are fairly satisfactory. Surface cleansing is well attended to. There are public latrines in all naris of the town, but they are not kep as clean as they ogath to be. All the private privies are cleaned twice & day. There are no well privies. The nucht-soil is carriedly tranched. The arrangements connected with interment and creamston are satisfactory.
Lobarduega	Ranchi—Essel	136,163	!	11.01	1.15	8	The restural drainage is good, as the minumster drains out completely into the finds. In some villages the drainage is obstructed by vegetation. See also page 130 of this Report.	Drinking-water is taken from kutcha, unpre- tered, filthy wells, which are also used for autface pollution, but they are reserted to for the washing of cattle and clothes. In some places water is taken from dains which ar open to pollution. Where rivers exist, the maker is used for all purposes. Water from the miliahs is not drank, but clothes and cattle an washed in them. Jute is steeped in unliahs See also gave 136 of this Report.	The houses are fill-ventilated and somewhat erowded and in some places the villages are surrounded by an inter-growth and low vegetation. Many of the houses, have tited roofs and are not observed. The poor keep personal cleanliness in the absence. The poor keep in high, facable of decomposing cow-dung, sweepings, and composing cow-dung, sweepings, and composing cow-dung, sweepings, and composing cow-dung, sweepings, and composing cow-dung, sweepings, and composing to all the places of the facts. Defocations, which are removed once a side and defined to the facts of the facts of the facts of the facts of the facts of the facts of the facts of the facts of the facts of the facts of the facts.
Lohardngga	Daltonganj Rarut	64,919.3	3	11.13	1.24	99.	See page 138 of this Report	See page 138 of this Beport	See page 138 of this Report,
Lobarduggs	Logina (Kera) Rural	67 3,972		\$:82	i	2.07	8-e page 137 of this Ceport	See page 137 of this Report	See page 137 of this Report,
Lohardugga	First. Bardor	92	Data no	99 100		1:38	See page 137 of this Report	The chief source of water-supply is the dari, Swhich is essentially a natural spring. At the part where the water issues from the spring an excavation is made for drawing the water by means of vessels. This shallow dipping well is usually brindin, for these springs are mostly perennal. The quality of the water in the darn is extremely bad, whige (1) to the land immediately surrounding it being turned into riceklue's; (2) to damuling up the margins of the kets, which retards the outflow of the spring water; (3) to the water of the dari necoming frequently continuous with a manl proof of water in the sodden field consequently polluted, by outtle. There is also anotter source of waters upply, called the 'chown, in the sand' bed of a small stream. The percolating water is fairly good in quality, when the sand is, we is frequently the case, free from organic impurities.	See page 137 of this Report.
Loharduggs	Turps or Khuati-	104,14	Data n	10.2 000	1	15.2	See page 137 of this Report	Sec page 137 of this Beport	See page 137 of this Report,

Loharduggs	Lohardugga-Reral	188,0	5	95.58 95.58		25 25	See page 137 of this Report As in	As in Chores	See page 137 of this Report.
Lobarduggs	Korambe-Earal	0,08		15-21		81.	Particulars regarding the 1	Particulars regarding the villages in this thans are not available, as they were not visited this year.	rere not visited this year.
Loharduggs	Tamar - Raved	35		42.8	İ	127	The natural drainage is good. The ground Is ta being undulating helps drainage of rainwaster, but the large bending and marshes there up dampiness for a long time after the filling. See also pages 136 and 137 of this Report.	Is taken from wells, which are mostly kutchs and promiscuously used. It is also obtained from bandls, daris, and rivulets. The dari water is filthy. See also pages 136 and 137 of this Report.	The houses are crowded together and eill-remtilated. Conservancy nil. The house refines and sakes are hespedage is the backs of houses. Defencetion is promiserous. The dead are inferred and cremated at the backs of houses, on readsides, and of hanks of streams. See also pages 186 and 137 of this Report.
Lobardugea	Sili-Zurel	8 8	Data	\$0 60		00.63	Drainage is imperfect. Some of the houses Is ta are situated on high and some on low ground. The where streams exist, they drain the localities of this Report. The of this Report.	ls taken from wells, which are mostly kutcha, promiscuously used, and in duty condition, and from the sars are during and darts. The tanks are often pollined by surface drainage and otherwise. There are bandls also, but their water is covered with weeds and their banks no restrown with vegetation, readerings them unfit to be utilised for drink interpretations ways, and in several tanks, rivinels, marshes, luir is steeped. In some places the river dries in when water is obtained by dieging into its dry bed. See page 136 of this keport.	The houses are damp in the rainy staten. The villaces are in althy condition, the pathways being covered with rubbish and refuse. House-refuse and rotting cow-dung accumulations are to be met with near houses. The latter is also heaped in adjacent fields, clattle are test close to steeping rooms and in compounds. Defecation is promisenous. The dead are cremated in adjacent fields and on banks of streams, tanks, and bandss. See also page 136 of this Report.
Lohardugga	Basis-Rural			80.8	i	1.08	Particulars regarding the 1	Particulars regarding the villages in this thans are not available, as they were not visited this year.	ere not visited this year.
Lobardoggs	Palkot-Reral	108,719	800-	7.78	i	1.01	Same as in Chores Sam	Same as in Chorea	Same as in Chorea.
Loharduggs	Barway - Raral	61,080	61.	11 27		1.66	Particulars regarding the	Particulars resarding the villages in this thana are not available, as they were not visited this year.	were not visited this year.
Loberduggs	Bru-Burd	190'99	<u> </u>	6.16	i	1:33	Particulars regarding the	Particulars regarding the villages in this thans are not available, as they were not visited this year.	were not visited this year.
Lohardugga	Belinnet-Eural	66,253	90.	11:34		÷	Particulars regarding the v	Particulars regarding the villages in this thans are not available, as they were not visited this year.	rere not visited this year.
Lobardugga	Baresund - Eural	. 14,667	 	1766		14.1	Particulars regarding the	Particulars regarding the villages in this thans are not available, as they was not visited this year.	wege not visited this year.
Loharduera	Manka—Baral	. 46,993	15.	19.55		*	See page 139 of this Report Ran	Same as in Chorea. See also page 138 of this Report.	See page 138 of this Report.
Lobarduggs	Patan—Raral	79,655	20.	18-64	41.	-37	Same as in Chores San	Same as in Chorea	Same as in Chorea.
Loberduggs	Chattarpor—Rarat	. 5 36,691	01.	18:69	89.	ti.	See pages 137 and 138 of this Report See	See pages 137 and 138 of this Report	See pages 137 and 138 of this Report.
Lobardugga	Garwa - Rural	. 75,890	89. 0	# #	85.6	9	is See page 138 of this Report See	See page 138 of this Report	See page 138 of this Report.
Lohardugga	Rankands—Rerat	64,300		13:35	-	9 .	Particulars regarding the	Particulars regarding the villages in this thans are not available, as they were not visited this year.	rere not visited this year.
Loharduggs	Hussensbad - Earal	. 102,515	40. 91	14.91	3.8 —	55	Particulars regarding t	Particulars regarding the villages in this thans are not available, as they were not visited this year.	y were not visited this year.

						98	SAUITABY BSITM.	SANTIARY ESTIMATE OF THE VILLAGES IN BACH CIRCLE UNDER THE HEADS OF	HE HEADS OF—
			RATI 00	O OF DEA POPULAT	RATIO OF DEATHS PER 1,000 OF POPULATION PROM-	8 L			
District.	Name of Circle.	-noitalne	.zod-lia	.Tev	olera.	-moo-lew- lainte.	Drainske.	Water-supply.	Domestic eleansing.
τ		đod	យខ្មេ	F97	цр	-	- 1	the sines The wells	surface cleansing is well attended to, the sweepings, &c.,
Singbhum•	Chaibessa—Toura	900'9	<u> </u>	14:31	-	4.16	The natural drainage is good, and it is supple. Is to mented by drains on the roadsides. Some are of these drains are purea saucer-shaped ones, on these drains are purea such restonion of and they are in good order. The extension of the purca surface drain is a necessity.		being mitilised in the jail garden. There are our war public and two iron (floribury's) latrines, but them public and two iron (floribury's) latrines, but them are insufficient. There are a few private private. Deforation is per carried on on the fields out of town. Nightwitis properly disposed of. There are no cess-pits near houses.
		•							See pages 144 and 145 of this Report.
Singbhum	Chaibess-Rural	205.652	. !	11.14		64.	See pages 144 and 145 of this Report See	•	See range 144 to 147 of this Beport.
Singbhum	Chuckerdharpur-	76,408	1	7.73	1	1.02	See pages 144 to 147 of this Report See	: 4	
	Rural.	_		- 1	ş	_ £	See names 144 and 145 of this Report See	See pages 124 and 145 of this Report	See pages 144 and 145 of th's Report.
Singbhum	Ghatsilla—Rural	165,709	3	1	_ _	- -	:	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.
Singbhum	Seraikela—Rural	77,062		7.87	\$	•		See nages 144 to 147 of this Report	See pages 144 to 147 of this Beport.
Singbhum	Kharsowan—Rural	, sı,127	1	-4- -6-	-	<u>:</u>	Sec pages 144 to 147 of this Report		_
Manbham'	Purulia—Town			11:07	- I	61 61	The natural drainage is good. The municipal drains with the Parachee discharge into the rulet to the east and north. The drains are kutcha, but the floors of most of them are putched with stone. They are kept clean and in efficient working order.	sheer for drinking is chiefly taken from the sahebunge lake. It is good and sufficient, but the lake requires despening in some parts, but this textified on in five large tanks, and sell-water is used for culinary and other domestic purposes. The latter is, however, drank to some extent.	Surface eleansing is well attended. There are four public laterines, returnes, returnes, returnes, returnes, far from habitations. There are four public laterines, far from habitations. The private privies are not under municipal management. The private privies are not under way from habitations. Cow. The night-soul is trembed away from habitations. Tannerits duna is met with in the compounds of houses. Tannerits in bad condition exist. The arrangements for the distinct of the dead are good.
1							-		See pages 134 to 1s7 of this Beport.
Manbhum	Purulia-Raral	171,487	- 15	12.07		-58	See pages 144 to 147 of this Report	see pages 144 to 141 of this reduct	
	T-incre Dame	875 76	92	11.00		1.51	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	
	an /war _ainding				- 4		See page 144 of this Report	See page 144 of this Beport	See page 144 of this Report.
Manbhum	Jhalda—Town	-	E P	TION BASE	<u> </u>		6	See nages 144 to 147 of this Report	See pages 144 to 147 of this Report.
Menbhum	Jhalds-Raral	e7,138		12.89	75. 		:		See pages 144 to 147 of this Report.
Manbhum	Begmundi-Rural	33,384	.: 	13-98		1.43	See pages 144 to 147 of this Report	See pages 144 to 141 or the pages 200	
Manbhum	Ichagar—Raret	64,342	342	 	81.8 81.8		1.15 See pages 144 to 147 of this Report	See pages 144 to 147 of this Keport	

									Control of the contro	
Manbham	Barabhum-Baral	133,847		95.00	11.	*	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Beport.	
Manbhum	Manbazar—Rurol	68,615	-	13.54	루	*3	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.	
Manbhum	Raghunathpore—Rural	108,668		10.62	25	3	%5 See pages 144 tol147 of this Beport	See pages 144 to 147 of this Report	See pages 144 to 147 of this-Report.	1
Manbhum	Gourandi-Burat	45,798	30.	10.76	-16	1 33	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	Ses pages 144 to 147 of this Report.	
Manbhum	Para-Zural	89,740	l	10.11	<u>\$1</u>	\$8	See pages 144 to 147 of this Beport	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.	1
Manchum	Chass-Rural	89,173	ş	8.27	\$	1.35	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 1s7 of this Report.	
Manbhum	Govindpore-Rural	89,673	એ	14.03	작.	S#.1	See pages 144 to 147 of this Report	See prges 144 to 147 of this Report	See pages 144 to 147 of this Report.	
Manbhum	Tundi-Rural	18,417		96. 81		ŝ	32 See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Beport.	
Manbhum	Jharia-Rurod	\$9,854		13.19		12.	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.	
Manbhum	. Nirsha-Rural	50,627		8 16	83	19.	67 See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.	CIV
Manbhum	Topchanchi-Bural	\$10.8		15:47	,	żs	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report	See pages 144 to 147 of this Report.	11

. For a general account of the Sanitary condition of the Villages in these Districts, see pages 146 and 147 of this Report.

(Trice of Sanitary Commissioner for Bengal,)

The 20th June 1887.

. R. Lidderdalb, M.D., Deputy Surgeon-General, Sanitary Commissiones for Bengal.

· APPENDIX No. VII.

STATEMENTS EXHIBITING PARTICULARS REGARDING THE VACCINE OPERATIONS OF THE YEAR 1886-87 AND OTHER INFORMATION CONNECTED THEREWITH.

STATEMENT No. I.—Showing particulars of Vaccination in each

-		<u> </u>	equare.	vaccinators the seascu.		anger processors as the fi	:	vacci-		PRIMAR	Y VACCIN	Ātios.	
			per	f vaccir ut the se		UMBER OF ACCINATES			,	Total.			Success
Number.	CIBCLES AND DISTRICTS.	POPULATION.	Average population mile.	Average number of employed throughout	Males.	Females.	Total.	Average number of persons nated by each vaccinator.	Males.	Females.	Total,	Under one year.	One year and under 6.
1	2	8	4	5		6		7		8			10
1	Calcutta Circle of Superintendence. Calcutta	438,219	54,152	19	5,786	4,777	10,563	556	5,178	4,491	9,669	4,176	4,172
1 2 2 3 4 6 6 6 7 8 9 10 11 12 12 13	Metropolitan Circle of Superintendence Burdwan Bankura Birbhanu Midnapore Hughli (including Serampore) Howrah 24-Pergunnahs Nuddea Jessore Kiulna Murshidabad Calcutta (Bovine Vaccination Department). Suburbs of Calcutta	1,284,907 956,424 786,580 2,885,862 881,164 6:9,763 1,960,012 1,545,291 1,879,784 1,059,518 1,143,106	516 383 448 481 742 1,139 677 658 515 541 550 10,932	80 40 20 69 30 14 65 41 89 51 88 421 2 12	15,298 12,230 10,997 22,273 12,813 8,655 19,633 21,088 26,440 20,216 23,028 192,671 388 5,028	14,750 11,400 10,534 21,292 12,076 8,490 17,657 10,982 24,600 10,922 21,451 181,717 5,844 187,040	80,018 24,090 21,531 43,545 24,859 17,145 37,290 41,470 374,390 44,470 374,390 480 13,872	1,002 002 1,077 631 830 952 573 1,002 574 769 1,170 763 282 1,156	15,206 12,230 10,097 22,204 12,813 8,665 14,633 21,683 20,487 20,216 20,216 30 5,272	14,780 11,890 10,584 21,284 12,078 8,490 17,657 19,082 24,603 18,1708 181,708 181,708	\$0,048 24,090 21,531 45,518 24,689 17,145 37,290 41,070 51,040 50,238 44,475 874,364 46 10,068	8,291 1,316 1,846 7,110 8,299 3,388 6,742 4,623 4,623 4,291 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,203 4,003	22,081 16,957 13,129 27,986 17,804 12,294 27,493 32,027 35,698 25,268 25,268 33,107 264,744 7 5,440
1 2 3 4 5 6 7 8	Darjiling Circle of Superintendence. Dinajpur By licensed agency Maldah By ditto ditto Garan By ditto ditto Garan By ditto ditto Bogra By ditto ditto Bogra By ditto ditto By ditto ditto By ditto ditto By licensed ditto By licensed ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By ditto ditto By licensed ditto	1,501,786 693,924 1,309,753 2,020,841 724,212 1,275,424 144,191 573,615 1,833,671	365 367 557 598 494 692 118 199 373	60 87 56 55 32 66 5 5 2 38 50	21,384 12,651 21,334 24,147 8,825 20,794 6,095 7,761 26,819	19,503 12,112 19,033 32,256 8,431 20,898 5,649 625 6,912 24,374	40,887 24,763 40,307 46,403 17,254 41,602 11,744 1,325 14,613 51,198	681 669 721 843 589 744 2,319 662 386 1,021 2,349	21,373 12,651 21,243 24,147 8,823 20,794 6,095 7,751 26,818	19,502 12,112 19,009 22,256 8,431 20,808 5,649 625 6,912 24,374	40.875 24,763 40,302 44,403 17,254 41,692 11,744 1,325 34,408 61,192	8,295 6,475 8,623 5,398 3,429 8,550 2,952 653 5,552 12,272	29,043 17,656 29,920 88,184 13,490 30,074 3,807 639 6,378 37,565
1 2	Total of Darjiling Circle Ranchi Circle of Superintendence. Manbhum By licensed agency	1,000,070	255 128	392 397 82 10	144,408 150,498 14,898 6,005	134,144 139,703 13,718 5,744	278,547 290,391 28,616 11,749	711 731 894 1,175	144,350 150,445 14,850 6,005	139,748 139,748 13,690 5,741	278,469 290,213 28,540 11,749	59,253 62,235 7,792 2,360	204,849 208,650 20,081 7,043
3 4 5	Singolum By heensed ditto Hazaribagh By ditto ditto Lohardugas By paid ditto Political States of Brguja, Jhaspur, Gaugpur and Bonai.	3 1.003.784	153 145 41	23 48 49 26 49	16,208 13,190 9,472 23,640 10,108	9,044 12,446 8,904 22,655 9,333	19,252 25,656 18,376 46,295 19,441	837 597 835 1,781 897	10,208 13,182 9,472 23,682 10,108	9,044 12,445 8,904 22,647 9,333	19,252 25,627 18,376 40,279 19,441	5,148 8,543 8,693 12,677 5,117	12,768 17,638 12,696 32,939 13,758
	TOTAL OF RANGUI CIRCLE Southal Pergunnal's Circle of	4,364,083	122	173 205	72,044 87,521	81,864	139,260	805	87,457	67,159 81,807	139,139 169,264	36,275 42,268	97,384
1 2 3	Superintendence. Sonthal Per- By licensed agency guinahs. Bhagulpore { By paid ditto By licensed aitto } Monghyr { By paid ditto } Total { By raid ditto } By raid ditto }	1,547,642	283 447 482	76 { During recess. 54 { 42 97 { 42	20,202 32 14,450 85,363 3,276 35,395	19,553 42 13,763 34,463 2,769 34,505	39,755 74 29,213 69,826 6,045	523 522 1,063 62 1,664	19,442 82 14,450 85,362 8,275	19,061 42 13,763 34,463 2,767	38,503 74 25,218 69,825 6,042 69,899	6,195 1 8,062 5,410 429 5,411	29,650 58 22,087 63,111 5,391 62,169
	TOTAL OF SONTHAL PERGUNNARS CIRCLE Eastern Bergal Circle of Superin- tandence.	5,984,716	891	209	73,820	70,590	74,013	328 585	37,167 72,561	85,591 70,096	79,758 142,657	10,576	119,897
1 2 3	Mymensing By heeded agency Faridore by anto ditto Noakhali By ditto ditto Daces By paid ditto by heensed difto	2,991,854 1,600,821 815,648 } 2,023,628	478 711 499 725	124 84 46 During recess. 92	33,234 17,055 4,850 248 22,757	30,932 16,806 4,852 189 21,985	64,166 33,861 9,202 437 44.748	517 403 200 	88, 284 17,036 4,850 246 22,757	30,932 14,799 4,352 188 21,985	64,166 33,835 9,202 ,434 44,748	6,846 2,889 1,144 41 8,841	43,167 22,507 5,506 286 83,090
8	Ipporah By ditto ditto Backergunge By licensed ditto Total By Paid ditto By Paid ditto	1,488,289	601 628	{ 97 8 97	95,512 1,219 95,760	92,011 92,718 1,161 92,902	44,268 188,225 2,880 188,662	798 1,941 798	95,512 1,210 95,758	92,011 92,713 1,161 92,901	44,268 188,225 2,380 188,659	5,917 8,433 132 8,474	70,401 899 70,687
	TOTAL OF EASTERN BENGAL CINCLE	10,549,789	586	427 524	197,182	190,149	198,619 -867,981	789	101,858	97,240	198,593 887,259	28,743	206,601

rcle of Superintendence during the year 1886-87.

		4		Re.	v4cc11	TAR	ion.			,	OF B	SCENT Å	OB	ELIGION V	ACCUMA	R WUI	BER	vaccinated	A SOI	VERAGE AL UMBER OF NS SUCCES CCINATED	PER- SPULLY IMPRING	BER FROM DUI	AGE NU OF DEAT	Tub Pok K
			To	otal.		•	St	cces	eful.		_	CASES.	_	Fotal nun	ber va	c unat	ed of—	e ssfully was	ulation	HE PREVIOUS YEARS			YEARS.	
Dove B years.	TOTAL AT ALL AGES.	Males.		Females.	Total.	Under 1 year.	1 year and under 6.	1 (Above 6 years.	Toral AT ALL AGES.	Primary		Re-vaccination.	Hindus.	Mahomedaffs.	Christians.	Other races.	2	r 6,000 of	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of	population.
1	12			13		14	T		10	17	1	8	19	90	21	22	23		24	25	26	2	7 1	29
492	8,840	0	108	286	894	-			100	100	97	7.64	3.28	6,743	3,06	65	3 1	01 2	80.63	9,514	21'96	-	158	-36
4,860 5,751 6,528 8,234 3,771 1,458 4,013 4,163 7,451 1,638 7,059	\$0,032 24,024 21,503 43,330 24,874 17,140 37,248 40,852 50,785 39,197 44,872		9	8 8 2 	17			2	11	11	99 99 99 99 99 99 99 99	9·72 9·86 9·49 9·98 9·97 9·88 9·50 9·50 9·80 9·70 1	34·70 40·00	27,108 23,245 16,799 41,787 21,391 14,586 22,882 15,101 19,729 16,817 20,270	2,949 4,739 1,777 3,40 2,55 14,10 25,78 31,25 22,42 24,20	0 5 0 5 1 9 30 7 18 8 5	8		28:38 25:11 27:38 7:80 28:22 32:35 27:38 27:38 27:01 36:99 88:82	347,173	25.0	4	97 24 16 863 26 16 34 80 18 9 120	07 02 02 14 03 03 04 06 06 06 10
34,726	873,357 42		15 358	11 61	26 419	۱۱.			15 61	- 6	i 1	00 00	65:38 16:80 56:32	280,715 195 9,489	134,11 10 4,20	10	31		26.93 '40 44.73	10,759	42.7	4 }	92	•8
1,086 35,816	9,503	-	756 129	1,048	3,804 4,249	- -	-		1,738	1,75		99.71		2,49,399	1,38,4	-ŀ		-	27.28	358,524	25.4	0	809	.0
3,518 7,32 1,708 2,746 335 2,987 3,860 1,338 3,860 16,023	40,851 24,783 40,283 17,284 41,617 10,649 1,925 14,400 51,175 10,649 278,024		11	24 25		5		1 6	10 54 54 64 64		30 1	99-99 00-00 90-94 90-95 90-95 90-87 90-82 90-99 90-93	91'00 92'30 91'02 91'02	19,446 11,579 5,846 17,716 2,464 8,991 10,939 885 9,686 27,373 10,939 102,986 113,925	4,9 2:3,6	94 20 68 90 01 88 009 607 609	14 2 2 14 23	703 31 68 9 703 369	27*20 35*71 80*77 22*85 22*85 23*83 82*62 73*85 9*18 25*20 27*90 1*05 27*58	55,610 246,656	21	35	18 36 16 4 6 5 15 6 4 4 4	91 91 91 91 91 91 91 91 91 91 91 91 91 9
523 1,383 1,197 1,955 1,356 452 370		6 1 6 5	48 8	28		20 16		10	2:	7	27	99:61 99:64 99:85 99:85 99:92 99:92 99:40	93°10 100°00	27,503 11,724 18,845 23,380 16,809 43,764 19,423	2,	18	24 290 87 56 ,583		28·18 21·01 84·37 25·26 13·72 35·37 89·07	}		· N	49 64 240 267 ot under tration	ı. —
9,739 4,497			64		7 ":	121	:::	iö	7	1	83	99.62	68.20	28,533 132,915 161,448	4	512 430 ,942 1	90 1,915		6.78 81.67 38.45	34,01 98,45 132,47	8 2	2.86 0.35	630	<u> </u>
7,296	167.7	27	64	- 5	7	121	-	10		-	83	99.72	68.59	101,75	<u> </u>		-							-
2,59 1: 2,05 2,10 2,10	5 7 28,0 5 69.6	74 06 326	760	49		252 1	-	6	-		,173 1 3	99:82 100:00 99:58 99:78 99:83	100.00 100.00	6,18	2 3 0 0 7	4,060 6,025 836 6,025	 13 3	19,609 452 155 526	25.59 .03 14.76 36.98 5.20	3 } 5 }			134 490 526	-
2,19 4,80	72,	564	76	1 -		,255 ,255 ,286		8	1,1		1,176 1,177	99.73	93'70	44,21	34	8,696 4,711	366	20,677 20,832	26.8	-		26-12	1,150	
7.7	16 64, 89 33, 44 9, 81 75 44	129 735 194 408 709	1	19		2	6		· · · · · · · · · · · · · · · · · · ·	19	20	99'9 -94'6 99'9 100 0 99'9	0 100°0 0 38°3 2	15,4 2,3 3 16,1 16,1 97,	170 172 138 14! 063	48,748 18,296 6,821 195 27,896 29,215 80,868	1 95 9 8 4 	240	217	19 27 20 }• 09 74			408 178 437 167 339	7
109,3	40 2	,143 ,880 ,551			<u>-</u>	*****	8	<u>- -</u>	-	-	20		4 83	33 97,	4380	90,083	1,133		1 17.	87 130	,688 ,808	13°84 12'49		
42,	198	,415 ,966	-	19	7 -		29	<u>:-</u> -	7 -	19	2			-		220,522	-	24	36	68 271	.,496	25-73	1,74	13

STATEMENT No. I .- Showing particulars of Vaccination in sach

			ednere	nators sason.	TOTAL NI	,	Panaora	vacei-	,	,	PRIM	IARY VAC	CINAT OF
	,		, F.	vacci	TOTAL N	MOCIVATE:).	persons	•	Total.			Succes
Number.	CIECLES AND DISTRICTS.	Population	Average population mile.	Average number of vaccinators employed throughout the season.	Males,	Females.	Total.	Average number of persons nated by each vaccinator.	Males.	Females.	Total.	Under 1 year.	l year and under 6.
1	2	3	4	5		6		7.	,	8		9	10
	Orisea Circle of Superintendence.	1)							
1 2 3	Cuttack By paid agency By licensed ditto Puri By paid ditto Tributary Estates	1,667,998 823,405	476 343	18 25 12 (3 from Cuttack)	17,734 7,436 8,120	16,258 6,665 7,202	33,992 14,101 15,322	1,898 564 1,278	17,734 7,436 8,120	16,259 0,665 7,202	33,992 14,101 15,322	1,247 989 627	28,820 11,134 12,582
	of Ungool, Moor- bhani, Baramba and Narsingpur.	540,995	108	4 (3 from Cuttack)	1,612	1,250	2,862	715	1,612	1,250	2,862	151	2,198
	Total { By paid agency By licensed ditto }	2,541,396	256	28 25	27,466 7,436	24,710 6,665	52,176 14,101	1,863 564	27,446 7,436	24,710 6,665	52,176 14,101	2,025 988	43,600 11,136
	TOTAL OF ORISSA CIECLE			53	34,903	31,375	66,277	1,251	34,902	31,375	66,277	8,013	54,736
1 2	Patna {By paid agency by heensed ditto } Shahabad {By paid agency by heensed ditto } By heensed ditto }	1,524,059 1,845,827	741 424	During recess 41 48 36	189 7,736 16,215 8,965	187 7,381 17,105 7,961	376 15,117 33,320 16,926	3,685 694 483	189 7,734 16,183 8,964	187 7,380 17,085 7,959	876 15,114 83,268 16,928	77 825 1,687 3,606	272 13,474 25,730 10,927
	Total {By paid agency }	3,309,865	526	{ 48 76	16,464 16,701	17,292 15,342	\$3,696 \$2,013	702 422	16,372 16,698	17,272 15,339	33,644 32,037	1,764 4,431	26,002 24,401
	TOTAL OF BEHAR CIRCLE)			124	88,105	32,634	65,780	530	38,070	32,611	65,681	6,195	50,408
	GRAND TOTAL OF By Incensed ditto ALL CIRCLES Total	50,787,125	382	$\left\{-\frac{\frac{285}{1,611}}{\frac{2,006}{}}\right $	210,790 572,555 783,354	200, 104 534,418 738,822	411,208 1,110,973 1,522,17¢	1,443 613 726	207,012 571,640 778,682	198,988 537,821 736,809	406,030 1,109,461 1,515,491	33,833 175,679 209,512	236,723 795,556 1,032,279

OFFICE OF THE SANITARY COMMISSIONER FOR BENGAL,

The 15th May 1887.

STATEMENT No. 11 .- Showing the cost of Vaccination in cac.

							Es	TA BLI	BH M.R.N	T.		4					Expr
	Ствелка.	Superintendents.	Deputy Superint-nd-	Native Superintend.	Inspectors.	Total.	Head vaccinators.	First class vaccinators.	Total.	Second and third class vaccinators.	Apprentices.	Total.	Clerks.	Menial servants.	Total.	Pay of establishment	Travelling allowances.
1	8	8	1 4	5		7	8	9	10	11	12	13	14	15	16	17	18
		<u> </u>	İ	<u>.</u>												Rs. A. P.	Rs. A. P
	Calcutta	1	, 2			8	8	5	8	14		14	1	1	2	6,226 9 8	720 0
	Metropolitan Bovine Vaccination Departmen	1	4	-::	39	44	-::	:::	:::	2		2	3	- 6 7	9	25,885 15 2 1,586 14 3	10,331 13 (275 12 14
	Suburbs. Suburbs of Calcutta		1		2	3		5	5	7		7	·	4	4	8,000 4 9	551 9 10
	TOTAL OF METROPOLITAN CIRCLES		-		42	48		., 5	- 5	9		9	4	17	21	80,473 2 2	11,159 8 9
	Ranchi Sont hat Perga, nahs Eastern Reng d Ovissa	1	2 1 	₃	12 5 11 6 2 4	15 10 12 9 3	1 1 3 6 3 4	5 6 6 11 10	6 1 9 12 14 14	30 36 61 17 38	19 • 4	58 36 91 21 88	1 1 2 1	4 3 2 3 2 1	5 4 8 5 3 2	\$1,393 11 1 12,580 12 10 9,353 5 11 10,174 10 0 5,650 3 9 8,983 6 0	3,899 107 7 1,133 1 6 2,771 10 1 3,629 8 6 1,209 0 6 1,767 8 6
	TOTAL OF VACCINATION CIRCLES			6	82	107	21	48	69	209	58	267	12		45	1,09,778 18 0	26,280 9 11
	Mumcipalities									248	•	248			¢.	19,010 8 6	.,
	, GRAND TOTAL	6	11	6	82	107	21	48	69	457	58	515	12	83	45	1,21,786 0 6	26,280 9 11

Office of the Sanitaby Commb. for Bengal,)

The 15th May 1887.

cle of Superintendence during the year 1886-87-concluded.

			R	B-VAOCI	N A	TION			PERCE		Religi	ON OF THE	R NUM RD.	BER	vaccinated n.	AVERAGE NUMBER OF BUCCESSFUI	PERSONS'	AVERAGE BER OF I FROM SMA	BATHS
			Total.		'	Si	uccessful		OF SUCC		Total n	umber vac	cirate	i of—	lly Yac	CINATED THE PER PIVE Y	DURING VIOUS	DURING PREVIOUS PART	THE
Abore 6 years.	TOTAL AT ALL AGES.	Males.	Females.	Total.	Under 1 year.	1 year and under 6.	Above 6 years.	TOTAL AT ALL AGES.	Primary.	Re-vaccination.	Hindus.	Mahomedans.	Christians.	Other races. •	Persons successfully vapor 1,000 of spopulation.	Number.	Ratic per 1,660 of population.	Number.	Ratio per 1,006 of population.
11	12		18		14	15	16	17	18	19	20	21,	22	23	24	25	26	27	28
1,888 1,200 1,178 246 3,907 1,200 4,507	\$1,950 13,324 14,387 2,595 48,932 15,524 62,256					 			93'09 94'44 95'89 00'98 93'80 94'48		31,597 13,219 14,685 2,862 40,144 15,249 62,893	2,371 s 847 594 2,965 847 3,8 2	24 5 43 67 5 72		19·15 7·99 41·48 4·71 • 19·25 5·24 24·40	46,241 558 46,719	8·67 10 8·77	1,469 308 Not ur registra 1,837	'08 1'14 ader tion
7 645 5,242 2,018 5,249	356 11,944 32,0.9 16,551 33,015 3:,495	32 1 	1 20 2 2	3 52 3		 2 2	 1 3 • 1 3	 - 3 3 3	95.44 99.09 99.06 98.52 98.62 98.72	5'88 100'0 5'89	295 13,851 30,995 16,187 31,290 30,038	81 1,266 2,319 739 2,400 2,005	 6		9.80 17.69 8.96 9.79	20,488 7,685	7·86 2·28	582 232	·38
7,912	64,510	35	23	58	-	2		- 6	98'67	10.25	61,328	4,405			19:14	34,178	10'14	814	*24
128,247 134,100	398,803 1,105,335	3,757 915	1,416 507	5,173 1,512	- :.	25 34	1,000 1,312	1,925 1,376	98'89 99'73	45.00 91.00	297,475 631,028	110,513 455,681	2,254	960 21,286	7:89 21:79	882,837 888,726	7.63 17.49		
262,347	1,504,138	4,672	2,013	0,485		59	3,242	•3,301	99.51	57.02	928,503	5,66,195	5,232	22,246	29.68	1,271,968	25:02	7,383	'14

R. LIDDERDALE, M.D., Deputy Surgeon-General, Sanitary Commissioner for Bengal.

rele of Superintendence during the year 1886-87.

TURE.				ł'A1	D REOM —			opera-	suc-
Contangencies.	Тотаь соят.	Imperial Fund.	Previncial Pund.	Local Fund.	Municipalities.	Native States.	TOTAL.	Number of successful c tions.	Average cost of each cessful case.
19	20	21	22	23	24	25	26	27	28
Rs. A. P.	Rs. A. P. 8,584 9 0	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P. 8,534 D 0	Rs. A. P.	Rs. A. P. 8,534 9 0 36,697 2 8	8,940 8,78,374	Rs. A. P. 0 15 3
1,078 0 0 2,867 2 3	36,697 2 8 3,197 6 11 4,624 14 7 44,519 8 2		3,197 6 11 1,470 15 6 41,286 2 7	79 6 6	3,153 15 1 3,153 15 1		3,197 6 11 4,024 14 7 44,519 8 2	103 11,262 3,84,739	0 11 0
200 0 0 7%0 0 0 250 0 0 251 0 6 223 0 0 58 8 9	25,893 5 8 13,818 18 10 12,876 0 0 19,055 2 6 7,078 3 9 10,809 7 3		25,803 5 8 13,453 13 10 12,375 0 0 19,055 2 6 6,067 7 9 10,809 7 8			360 -0 0 108 12 0	25,893 5 8 13,813 13 10 12,375 0 0 19,055 2 6 7,073 3 9 10,809 7 3	2,88,744 1,67,810 1,43,441 8,90,993 02,256 64,516	0 1 5 0 1 8 0 1 4 0 0 9 0 1 9 0 2 8
6.017 11 8	1,42,074 ,2 2		1,29,840 7 7	79 6 6	11,688 8 1	4C5 12 0	1,42,074 2 2	15,07,439	0 1 6
	12,010 3 6	B	387, 8 0	880 6 (1	10,912 9 6	398 11 6	12,010 3 6	81,687	0 2 4
6,027	1,54,084 5 8	, ,	1,30,227 ft 7	459 18 0	22,601 1 7	795 7 6	1,54,084 5 8	15,89,126	0 1 7

R. LIDDERDALE, M.D.,

1/eputy Surgeon-General,

Sanitary Commissioner for Bengal.

STATEMENT No. III.—Showing particulars of Vaccination performed by Vaccinators attached

Total PRIMARY VACCINATION PRESENTS VACCINATED PRESENTS VAC	gedicite. In the second of	AND CONTROL OF THE PROPERTY OF	Number of to the pensare during the during the	हुँ जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिल्ला जिला जिला जिला जिला जिला जिला जिला जि	Females.	Total number of persons cinated in 1883-56.	nter of by each	Males.				under 6	Above 6 years.	AL OF ALL
Burdwen	e cluding Serampore	AND CONTROL OF THE PROPERTY OF	Number of to the pensare during the during the	1,747 1 815	1,459 3,5	Total nu	o de la	Males.	females.	Potal.		ander	ove 6 years.	ão.
Sankura	e cluding Serampore	nra	3 1 6	815	1,459 3,5	ne 9 A11	1				1 7	F	A P	TOTAL AGES.
Mozafferpore	ange	## ## ## ## ## ## ## ## ## ## ## ## ##	200 200 200 200 200 200 200 200 200 200	949 1,588 1,588 1,588 1,588 1,585 1,75	71 71 71 71 71 71 71 71	1,246	522 128 276 276 276 817 283 311 263 525 425 67 305 507 297 297 297 297 297 297 297 297 442 419 442 449 442 449 442 449 365 862 449 442 449 863 864 864 864 864 864 864 864 864 864 864	794 984 1,685 2,179 5,406 1,782 1,782 1,782 1,782 1,984 1,064 1,564 1,564 1,564 1,564 1,694 1,694 1,99	729 729 71 6-9 1.196 1.890 2.919 1.53 355 1.290 8.433 215 215 215 216 615 7735 132 411 2.584 1.603 3.734 1.736 1.736 3.735 3.735 3.736 3.7	1,528 1,685 2,774 4,068 4,383 2,533 2,533 8,072 218 409 479 471 471 471 471 471 471 471 471 471 471	138 996 998 398 392 1,142 28 414 302 1183 1183 118 118 118 118 1240 848 240 848 241 848 241 848 241 848 241 848 242 2,462 433	1,164 64 64 71,830 1,937 1,830 1,700 1,700 1,933 1,933 1,933 1,650 1,650 1,650 1,650 1,650 1,650 1,550	787 212 5 5 298 481 107 1,108 103 796 303 55 55 848 448 304 422 247 540 127 540 127 137 157 157 157 157 157 157 251 157 251 157 251 157 251 157 251 157 251 157 251 157 251 251 251 251 251 251 251 251 251 251	8,052 1,514 1,117 1,514 4,447 4,039 6,316 2,302 750 8,031 1,178 8,53 4,54 3,13 1,25 2,693 1,217 1,413 1,217 1,413 1,217 1,413 1,217 1,413

Office of the Sanitary Commr. for Bengal,

The 15th May 1887.

, to Municipalities, Dispensaries, &c., in the Province of Bengal during the year 1886-97.

Total. Suchessful. Number Vaccinated among - Prichessul Care. Prichessul Care. Care		,	Rz-v	ACCINAT	ion.				•			Dun and		•	
The state of the	T	lotal.			Suc l e	ssful.		NUMBE	R VACCI	NATED A	Mong-	SUCCESSE	OL CARES.		•
\$\frac{1}{2}\$ \$\frac{1}{2}\$ \$\frac{1}{4}\$ \$\frac{1}{1}	Males.	Females.	Total	Underl year.	and under	6	žo	Hindus,	Mahomedans.	Christians.	Other races.				RSMARES.
I was a series of the series o	21	23 10 18 29 4 4 3 28 10 3 10 5 8 20 9 11 9 19 19 19 19 19 20 11 19 19 19 19 19 19 19 19 19 19 19 19	25 6 18 185 18 4 4 81 7 7 7 18 8 7 1 6 4 4 25 85 87 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 5	6 4 4 8 8 8 8 7 7 2 9 9 10 15 1 15 1 17 17 17 17 17 17 17 17 17 17 17 17 1	15 4 3 9 72 5 1 1 5 5 8 7 7 1 1 5 5 8 7 9 6 1 1 5 5 5 8 7 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	19	1,528 1,379 2,449 2,980 4,771 1,369 2,147 123 392 2,147 129 392 2,147 1705 1,306 1,816 3816 3816 3816 3816 381 2,977 4,819 2,989 1,993 2,989 1,993 2,989 3,47 7,912 883 347 7,912 883 347 7,912 883	32 111 272 324 1,066 1,714 1,068 3,46 3,47 1,195 42 171 1,470 1,167 782 1,470 1,167 782 1,278 1,278 1,288 1,	7 7 111 144 85 28 817 8 28 28 28 28 28 18 18 18 18 18 18 18 18 18 18 18 18 18	48 S41	99 40 91 40 96 38 96 38 96 39 97 53 97 53 97 53 97 70 96 31 97 70 96 31 97 70 96 31 97 70 96 31 97 70 96 31 97 70 96 31 97 70 97 70 97 70 98 98 97 75 98 98 97 75 98 75	43'18 17'39 73' \$55' \$0' 41'17 71'42 100' 64'70 100' 83'33 97'72 91'66 70'23 71'42 94'44	•	•

R. LIDDERDALE, M.D.,

Deputy Surgeon-General, Sunitary Commissioner for Bengal.

Conparative Statement No. IV .- Showing the Rumber .. Persons Primarily Paccinated and the Number of those Persons who were Su. sefuny Paccinated in each of the undermentioned Official Years.

	Number successfully vaccinated.			579,007	90,160	i	8 8 8	3,463	1,086,000	1,685,167
	Total number,		1896-87.	\$84,671	119,98	!	282,	296°S	1,090,090	1.602,527
	Number incessfully vaccinated.		1865-86.	245,636	\$0,257	į	119'53	2,986	961,844	1,346,957
	Total man latoT		188	251,138	378,346	l	25,083	8,436	966,230	1,361,781
	Yun bor mecessiully vaccins [6d.		1884-65.	376,941	96,389	•	30,678	3,521	960,578	1,457,205 1,381,781
	·Total number.		188	583,104	101,315	:	31,637	4,020	955,433	1,475,502
	Number aucocestully vectors (dinsied.		1883-64.	573,231	16: 03	:	31,967	3,684	411,988	1,324,653
	Total number.		188	378,597	63,518	i	35,363	6,591	866,550	1,350,519
TBD.	Zimber successfully wascinuted,		188-58.	672,185	68,250		16,994	082'6	168,934	1,223,943
VACCINA	Total number.	ended 31st March-	158	680,023	1981		18,136	11,329	474.207	1,346,646
PERSONS PRIMARILY VACCINATED.	Muraber anocessinly vaccounted,	rs ended 319	1881-82.	823,212	59.403	\$20	1,213	5,535	007:430	1,315,199
PERSONS	Total number.	Y 0.8.13	188	821,485	62,588	822	1,874	6,027	619'484	1,339,448
	Unmber successfully		1890-51.	888,268	49,827	69	188,8	2,846	414,178	1,359,267
	тобы патрет.		189	868,900	53,632	288	4,482	3,580	. a	1,383,763
	Vumber successfully vaccinated,		1879-80.	604,111	56,847	1,428	8,156	7,805	1,008,651	1,681,996
	Total number.		181	616,343	65,395	1,709	8,900	8,956	1,021,130	1,717,483
	Number snecessfully vaccinated.		1878-79.	983,020	67,683	1,058	2.934	868'6	665,453	1,939,435
	Total number.		181	506,487	73,146	1,354	8,329	10,475	682,009	1,276,800
	Mumber snocessfully vaccinated.		1877-78.	87.5,139	80,467	8	2,512	829'03	205,820	1,185,498
	Total number.		187.	239'888	36,875	1,148	8,010	816,22	228,236	1,240,800
	i H					i	i	, i	Br.	: •
	Ber à Blibengert.			Government		Local Funds	Native States	Dispensaries	Work done by ineculators.	TOTAL

OFFICE OF THE SANY. COMMR. FOR BENGAL, The 15th May 1887.

Sanitary Commissioner for Bengal. Deputy Surgeon-General,

R. LIDDERDALE, M. D.,

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A.

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed.

					-1			Ì)BATH	s dur	ı.Na—			•			B PER
Dis	TRICTS.	THANAS IN WHICH VACCINATIONS WERE PERFORMED.	Popula-	April 1896.	May 1896.	June 1886.	July 1896.	Angust 1896.	September 1886.	October 1886.	November 1886.	December 1886.	January 1867.	February 1887.	March 1887.	- i	BATIO OF DEATHS PRE- 1,960 OF POPULATION.
1		Calcutta	433,219	2		4	8	1		1	<u></u>	<u></u>				11	.05
Burd	wan	Burdwan Kains Kains Kains Kains Kanigunge Assensole Shabibgunge Khandghosh Raona Gangur Selimabad Ausgram Mangalkot Katwa Monteswar Bood-bood Purbasthalli Total	79,073		1	 1 				£						 1 1 	•01
Bank	curs	Bissenpur Ganasjalvhati	172,607 108,804 119,321 67,400 94,406 78,805 99,125	8 1 	 8 	 2 3 	1 	"1 ": ": ": ": ": ":				*			:::	14 7 2	-00
Birb	ohum•	Moureswar	126,50 87,77 107,89 122,72 88,83	8 3 3 9	::: ::: ::: 1	3 ::: 3 ::: 3	:::								::: ::: ::: :::	 5	
Mid	lnapore	Maclandpur Canthi Chandrakona Garbeta Midnapore Narainghar Dantun Gopiballabpur Jinargram Binpur Balbuni Keshpur Despur Debra Sabong Panchkura Sutahatta	74,00 80,50 130,55 58,51 135,75 125,75 120,11 128,46 130,17 130,17 150,17 1	9							1	3				1 12 2	
Hus	ghli & 11 eramporo.	Ransbaria Hughli Dhaniakhali Balasarh Pandus Jehanabad Kansakui Goghat Hodilbati Haripal Chanditola Krishnaghur	39,1 15,4 93,5 48,2 66,1 133,2 111, 42,1 84,4,5 55,			1					•		1	1			1
н	owrah .	Domioor	77, 109 63, 68	477 345 539 998 568 861 753							.		2 ::				2

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed—continued.

······	_					•		1	PATH	DURI	NG-	•		•			PEE TION.
CIRCLES.	Districts.	THANAS IN WHICH VACCINATIONS WERE PERFORMED.	POPULA-	April 1886.	May 1986.	June 1886.	July 1896.	August 1896.	September 1896.	October 1886.	November 1886.	December 1896.	Lanuary 1897.	February 1887.	March 1887.	TOTAL	RATIO OF DEATHS PER 1,000 OF POPULATION.
	24-Pergunnahs	Barrackpore including cantonment Dum-Dum Baraset Hossienabad Baduria Barripore Jaynagar Dumond Harbour Julygunge Atchipore Sonarpore Bhangor Doyganga Habra Naibati Rasirhat Haroa Matlaih Kulpi Debipore Bankipore Bankipore Bankipore Mathurapore	62,508 62,107 98,455 72,028 88,455 52,828 47,73 71,71 31,855 75,425 55,425 55,425 55,425 40,293 47,516 90,316 43,455 107,277 50,455												2	2	
		Total	1,360,019	1					-				-	***		7	.00
Metropolitan—continued.	Nuddea {	Kishnaghur Kushtis Kumarkhali Managhat Chagda Jaguli Chuadanga Meherporo Kishengunge Chupra Nakashipara Kaligunge Tehatta Karimpore Gangni Daulatpore Naupara Bhaluka Bhadula Alumdanga Damurhuda Kaligunge Santipore Naupara Bhatuka Bhadula Alumdanga Damurhuda Kalipol Jibunnagur Santipore Hanskhali	17.72 92.20 75.735 55.631 38.306 21.817 65.935 65.935 60.765 63.766 63.766 64.195 69.106 102.734 74.935 68.144 63.014 88.044 63.014 89.306 44.129 24.177 45.346	"1 ":" ":" ":" ":" ":" ":"								1		2	2	"1 ""8 ""	*007 **********************************
		Totul	1,545,291	2	1	1		1				1				12	-007
	Jessore .	Kotwali Keshubpore Jhenida Kotchandpore Magura Narail Baghirpara Moniramnere Godkhali Kalligunge Salkhia Muhamadpore Kalta Loltagarra salkopa Gopalnuegar Gouripotha Moheshpore Gaighata Sarsha	102,627 34,807														
		Khulna	121,212													,	****
į	Khulna	Dumuria Baitachatta Paiksacha Bashihat Mollahat Rampal Moreigunge Sytkhira Kalarua Magura Asasuni Kaligunge	109,020 87,601 70,478 187,618 50,478 49,927 62,670 87,876 81,899 48,212 63,412 140,616	::							 1		•••			1 	*009
		Total	1,059,518				1				. 1					3	*001

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed—continued.

•			*				I)	BATH	5 DUR	NG-			*		T	
Districts.	THANAS IN WHICH VACCINATIONS WELE CARRIED ON.	Popula- Tion,	April 1886.	May 1896.	June 1896.	July 1896.	Angust 1886.	September 1886.	October 1896.	November 1896.	December 1886.	January 1887.	February 1897.	March 1887.	TOTAL.	RATIO OF DEATHS PER
Murshidabad{	Sujaganj Gorabazar Barwan Bharatpose Bhahanagore Assanpore Raghunathganj Dewanserai Goas Jhellinghi Daulatbazar Hariharpara Nowada Gokaran Kalyangunge Manulla Bazar Bhadrihat Hhagwangola Shamshergunge Shi Mirzapore Khargram Barowah or Kandi	3 340 100	 	•··· ··· ··· ··· ··· ··· ··· ··· ··· ··	 		 		2							
<	TOTAL Suburbs of Calcutta TOTAL OF METROPOLITAN CIECES Dinajpur	251,439 14,111,240 14,111,240 199,826 199,826 199,827 199,827 199,827 194,822 81,877 66,238 67,208 48,588 70,666 74,497	3 	16 16 	14 14 	2 2 	6 6 	•		5 	6	8	6	9 0 	95 3 98 7 4 	0
 Maldah•	Binglish Bazer Kharbs	52,81 52,81 115,69 72,61 103,05 46,20 54,31 80,02	3 15 3 15 1 1 1 1 2 2 1 2 2 3	12	3 3 	8	3 	55	1						-1 	
 Rajshahye	Lalpore Haghmara Nougaon Manda Putia Singra Beauleah Burigram Charghat Godagari Pachupore Tanore	144,60 84,98 121,98 85,84 121,23 112,90 12,95 124,16 43,72 79,43 85,60 1,309,72	2 2 1 00 88 99 99			1 2 	 			• :::					2 11 16	-
Bungpore	Ullipore Badullapore	155,66 215,21 112,51 143,31 144,31 163,2 163,2 163,2 142,51 177,2 88,6 99,0 99,0 91,4 189,0	13 13 100 17 17 18	"; ;;;		*					**************************************				1 3 3	

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed—continued.

1	- 22.722	•							- MIT - 2	DEAT	ns Du	RINO-		•	•			FIOR
OI ECLES.	1)isteic	TB.	THANAS IN WITCH VACCIMATIONS WERE CARRIED ON.	Popula- Tion.	April 1896.	May 1886.	June 1886.	July 1896.	August 1886.	September 1886.	October 1898.	November 1896.	December 1886.	January 1887.	February 1887.	March 1887.	Total.	BATIO OF DEATHS PRE 1,000 OF POPULATION:
	Bogra		Bogra Shariskandi Sherpur Shibgunge Panchibbi Badalgachi Adamdishi Khetial Dhunnut Total	216,750 103,228 43,496 59,080 61,724 39,574 94,553 40,023 61,003					:::::::::::::::::::::::::::::::::::::::				• · · · · · · · · · · · · · · · · · · ·					
gen.	Pubna	}	Serajgunge Dulai Chatmohar Mathura Pubna Shazadpore Ulupara Raigunge Total	198,148 186,363 133,467 102,446 174,381 216,464 171,711 92,374	:::::::::::::::::::::::::::::::::::::::	1 1 		***									 1	1000
Dansing Concinacio	Darjiling	{	Darjiling	45,300 63,241 22,967 12,683	"io 	1	"1 2 	5 1 				:::		"; ": 1		::: ₄	13 7 	·11 ·20 ·30
il	Julpaiguri		Silliguri Roda Julpaiguri Patgram Mynaguri Alipur Kairanti Uhupguri	80,178 178,643 67,471 64,636 66,451 24,086 32,453 51,697		::	::	"1 ":" :::									"1 "1 " "	
	Purneah	{	Purneah Kusha Anjour Dhumdaha Gondwara Arrarea Mattari Ranigunge Kasengunge Kaligunge Kaligunge Kaligunge Kudwa Balrampore Moniari	138,704 124,489 109,391 123,945 200,013 94,115 107,552 158,100 196,142 277,059 134,275 115,031 54,456	2 2 1 1	8			 	3 			1	::			3 3 1 1	*007 *008 *03 *001
	Manblum		Total Total of Darylling Circle. Gourandi Purulia	1,833,671 10,08° 40,79° 177,487 83,584 64,242 68,615 108,668 39,740 39,673	8/2	24	10	1			3 ::::::::::::::::::::::::::::::::::::	1	-2 -4 	1 		-:- 	15 120 1 1	'01 '02 '01 '01
			Nirsha	60,627 48,018 24,258 67,133 133,847 89,173 18,417				1							 1	1	 3	*01
s	Singbhum	{	Chaibassa Chuckerdhurpur Ghatsalla Kharsowan Total	205,652 76,408 165,709 77,062 31,127 555,958			::	:::							"1 "1	 1 1 	 1 2 	 '006 '02
	Huzaribagh •	- 11	Chatra Gowan Gowan Baapdhar. Chouparun Pacbamba Jageswas Dumurbi. Kharackdiha Hazarrbagh Gimuria Huntergunge Ramghur Tamtowa or Paghur Kashmar. Burhi	52,118 53,376 59,302 70,437 86,097 53,598 68,695 150,545 87,029 86,954 72,958 56,780 47,094 53,064		***	1										1	**************************************

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed—continued.

		•							DHATE	S DUR	ING-				•	
-	Districts.	THANAS IN WHICH VACCIN ATIONS WERE CARRIED ON.	POPULA- TION.	April 1886.	May 1886.	June 1886,	July 1896.	August 1886.	September 1886.	October 1886.	November 1886.	Бесешрет 1886.	January 1867.	February 1887.	March 1887.	TOTAL.
	Lohardugga	Daltonsunge	04,202 122,152 88,234 104,140 68,335 67,988 56,220 122,023 89,078 51,080 79,655 95,698 14,647 36,591 75,899 04,300 102,515	7 2 2 3	• 6 	4 	5		100 100 100 100 100 100 100 100 100 100	K.					1	17
	,	Political States	492,546					Not	under	registr	ation.					
		TOTAL OF RANCHI CIRCLE	4,304,088	15	9	18	8					=		2	4	49
	Sonthal Pergunnalis	Rajmehal Deoghur Pakour Dumks Godda Total	243,474 \$89,665 204,919 \$61,111 \$48,498 1,547,662	20 1 21	 1	 2 3	 9 3	3 3	2 1 3	1		3 				3# 2 11 1 4
	Bhagulpore {	Madehpura	202,078 208,508 187,565 187,328 100,379 98,427 299,042 148,550 98,403 134,227 153,272 77,644	"1 " 	 2 3 	1	"1 ": ": ": ": ": ":	 1 4	:::::::::::::::::::::::::::::::::::::::					 1 1 		1 2 8 2 8 1 4 16
	Monghyr	Surajgurra Sheikpura Monghyr Gogri Kharakpur Tegra Beguserai Sesandra Chakai Jamui Total	199,440 81,736 865,954 143,079 203,632 879,794 122,389 109,540 112,154	i	5 2 7 11 1 8 16 1 	3 5 6 1 1 1 17	2 1 8 1 	1 1 8 3 1 1 	1	"" "" "" "" ""	"1 1 3 1 4 1 1 1 1	1 2 2 2 	\$ 6	 1 2 	1 2 1 5 10	20 3 19 85 7 25 63 1 5
		TOTAL OF SONTHAL PRE			65	21	25	18	4	2	11	9	6	9	10	248
Camera	Mymensing	Kishorgunge	229,462 117,759 122,459 460,243 267,104 217,734 193,288 76,263 101,372 178,288 171,655 114,447	2 1 1 1 1 11 	1	 1 2 5		 1 2 	2	4		 1 1 		 	4	:::7
	Paridpore	Bhanga Gopaigunge ; Palang Goalundo Braidpore Bhushna A wanpore Shibohar Pangsa Baliakandi Madaripore	104.386 85.44 256.259.259.259.259.259.259.259.259.259.259	 1 2 3 3 3 3 3 3 3								2	-		1	3 4 6

App. VII.]

Statement showing the Death's from Small-pox during the year 1886-87 in the Thanks in which Vaccinations were performed—continued.

			the state of the s								DEATE	s DUE	ING-			•	 -		P P
	DISTRICTS.	THA	NAS IN WHICH ONS WERE PERF	Vaccifi- ormad.		Population.	May 1896.	June 1886.	July 1886.	August 1896.	September 1886.	October 1896.	November 1886.	December 1886.	January 1887.	February 1887.	March 1897.	TOTAL	RATIO OR DEATHS PER 1,000 OF POPULATION.
	Noskhali '	Bol La Suc Ra Sa Ba	hegalnyah ramgungo khipur dherava mgungo midi mni attia			132,697 109,278 128,933 113,221 96,184 80,742	1							-\-		3	2	3	108
RAFTER BERGAL-concluded.	Dacon	HZJZXXX	albagh arirampore awabgunge affergunge anickgunge anickgunge tupsing tupgunge			164,287 100,000 160,235 143,012 91,199 184,196 243,463 119,515 164,159 275,984 174,831 202,788	1 1 4 1	4 2 2 2 8			2	2	1	- - - - - - - - - -		1 4	3		-0
EASTERN BERG	Tipperah		Hajigunge Nabinagar Muradaagar Chandpore			78,521 125,879 223,751 143,223 103,218 114,152 172,947 175,971 152,322 112,034 86,872		::: ::: ::: ::: .:: 4	 						 2 			"1	14
	Baokergunge		Jhalokati Gaurnaddi Medhisungo Barrisal Backergungo Nalohiti Surupkati Hhola Perozepore			95,188 141,958 184,192 145,711 131, 741 160,241 123,169 115,084 89,061 173,861 73,352			 1 2 11 1 	"1 "1 	 1 2 1 	 1 1 	1	3 1	22	 1 2 2 12 		 2 2 1 3	2 7 14 25 3 5 6 3 2 7 40 10
			Total of East Circle.	Total		10,549,789	-	27	30	9	9	6	8	21	35	87	25	28	284
ORTHA.	11		Cuttack Tirtol Jagatsingpur Dharamsala Jajpore Kendrapara Aul Ralipore Patamundi			155,535 183,677 215,001 286,762 239,503 175,323 91,015 240,979 109,401	3 6 5 14 3 6 1	2 1 8	1	2 1 	1 1 1 	 1 	 1 1	1 	1 1 6 1 7 	1 6 8 5 15 1	4 8 5 21 14 39 4 26 9	5 11 13 23 12 57 12 24 20	16 22 24 61 84 130 25 83 83
,	Puri	{	Khurda Banpur	Total		260,475 63,927	13		-	·5	2	:::	2 1		4	8	6		48 3
			Toiluntary Stat	Total	W.	323,400 549,99	.	6	-	8	2	Not u	nder N	gistra	tion.		-6		50
			Total of Or		***		-\-	5 18	-	19	5	1	5	\$	20	39	136	180	479

Statement showing the Deaths from Small-pox during the year 1886-87 in the Thanas in which Vaccinations were performed—concluded.

1	•	,		,				1	DEATH	8 DVR	ing —	,		~		1	PER.
CIRCLES.	DISTRICTS.	THANAS IN WHICH VACCIN-ATIONS WERE PERFORMED.	Population.	April 1896.	May 1886.	June 1836.	July 1886.	August 1896.	September,1886.	October 1886.	November 1896.	December 1896.	January 1887.	February 1887.	March 1867.	Total.	RATIO OF DEATHS PER
Врнав.	Patna	Fatuha Behar Attasarai Sillao Patua Rankipore Masuria Bikram Ililisa Dinapore Maner Harrh Mokameh Total	88,051 293,312 78,632 91,477 97,674 97,001 120,613 189,302 176,075 67,819 98,516 170,389 93,824	"1 "1 "1 "2 "6	• '''1		 1 1 8	3 1 1 2 2 5		1 8 9	 1	 		 3	1 4 1	3 5 2 13 7	.0. .0. .0. .0. .0.
#	Shahabad {	Domrson Belouti Bhabus Arrah Dhangain Buxar Mohania Debrio Sasseram Kharghar or Nokha Pira	242,103 183,311 166,095 281,437 179,916 145,587 160,413 78,884 133,942 104,647 179,492	9 5 1 2 8 2 4 	5 2 2 1 3 1 	2 2 2 	1 1 1 1 	₁ ₂ ₁ 1	**************************************	3 1 1 	 1 	1 15 16	26	 1 4 	1 0 11	15 9 7 66 6 6 7 3 1	*00 *00 *02 *01 *01 *01 *01 *01
į		TOTAL OF BEHAR CIRCLE	3,369,865	- 30	16	7	7	10	8	13	2	19	27		17	159	.04
		TOTAL FOR THE PROVINCE	50,787,125	277	175	104	86	54	24	86	48	98	118	186	252	1,448	.0:
		Municipalities, Dispensaries,	2,428,699	20	62	42	81	29	2	_6	10	7	8	16	50	278	-1
		GRAND TOTAL	53,215,834	297	237	146	117	83	26	42	53	100	121	202	802	1,726	.0

Office of the Sany. Commr. for Bengal,

The 15th May 1887.

R. LIDDERDALE, M.D.,

Deputy Surgeon-General,

Sanitary Commissioner for Bengal.

В.

Statement showing the Total	l D eath's registered fi	rom Small-pox in Ali	L THE DISTRICTS Q	f the Bengal Province
	during each n	nonth of the year 188	6-87.	•

								yewi					•	•	9.0	
•	ا • ي			· 		Numi	BER OF		HS DU	RING-	·				BATE O CO	
DISTRICTS.	Population	April 1596.	May 1986.	June 1886.	July 1896.	August 1886.	September 1896.	October 1886.	November 1896.	December 1836.	January 1887.	Fehruary 1887.	March 1887.	TOTAL.	RATIO OF DRATHS PRE 1,000 OF POPULATION.	REMARKS
Calcutta	433,219	2		4	3	1		1				·:-		11	.02	
Burdwan	1,391,823	1	4	1							•		5=	11	*007	
Bankura	1,011,752	11	6	4	• 1	1					"	•"		23	.05	•
irbhum	794,423	8,	1	8									,	5	.000	
idnapore	2,515,565	8		2					8	2		3	1	14	1005	
ughli including Serampore	1,015,005		•	•		1			2	1	1			6	.002	
lowrah	635,381							<i></i>		2				2	.003	
-Pergunnalis	1,618,420	2	.i						1		4	1	8	12	*007	
uburbs of Calcutta	251,439	1	. '					2						8	.01	
Total of 24-Pergunnahs	1,809,50	8	1					2	1		4	1	3	15	,008	
[udden	1.655,721	ż	1	1		1			1	1	1	2	2	12	.007	
евноге	1,939,875		1											1	10005	
Inrahidabad	1,226,790	3	5	3		8		2			9	1	5	24	*01	
ihulu a	1,079,948	ń			1				8					4	.008	
majpur	1,514,346	15	12	3	8	8	5	1						47	-03	
alshahye	1,338,638	2	4	4	3	1	1	1				₽	1	17	*01	•
lungpore	2,097,964	4	1		4		1		1	2	.•			13	.006	
logra	784,358			.,,										···		
hobna	1,311,728	-	1			1								2	*001	
Darjiling	156,137	10	1	8	6						• 1		4	25	•16	
ulpanguri	581,562		.		1			1		,				2	*008	
Andah	710,448	1											•	1	*001	
'urnealı	1,848,687	4	5			2	3			2			8	19	.01	
Dacca	2,116,350	*	9	2	ь	8	2	2	1	8	8	8	1	47	*02	
aridpore erogbira	1,631,734	5	•••	8				,@	4	٤	1		2	17	.01	
sackergunge	1,900,889	18	8	16	2	4	2	2	15	25	23	22	19	156	-08	
lymensing	3,051,966	17	7	8	2	8	2	4		2	ر	0	8	50	*61	
l'opperah	1,519,388		1	1		Ì	.		••	2	8*	3	8	21	.01	
hittagong	1,132,341	1	/		١, ١	9 1							"	1	.0008	
Nonakhali	820,773	1				1				1	8	9	9	28	.02	
Patna	1,756,856	7	2	2	4	11		9	2	8	1	5	8	54	.03	
-јув.,	2,124,632	37	47	27	9	15	93	5	7	8	5	3	23	319	•10	
Shuhabad	1,964,909	27	20	8	18	8	3	4	1	16	26	6	13	1.45	.07	
Mozufferpore	2,532,060	34	88	20	18	3	4	8	1	5	6	10	88	170	*06	
Onrbhanga	2,633,447	28	20	48	11	3	1	1	•••	10		21	21	159	.06	
arun	2,280,382	15	24	22	17	9	8	5	1	2	2	4	7	111	.04	
Champaran	1,721,608	220	354	248	133	107	18	7	7	10	10	13	50	1,190	*69	
longhyr	1,969,774	42	66	20	14	10	1	1	1)	8	6	7	12	190	.09	
Shagulpore	1,966,158	1	6	1	1	5		·".	"	".		2	1	17	.008	
Sonthal Pergunnahs	1,568,098	21	• 8	8	12	5	8	1	2	8				58	'08	
ottack	1,795,065	42	12	,	6	8	1	•	1 4	16	37	133	184	443	24	
Puet	888,487	20	15	7	8	5	r	5	1	4	8	8	14	94	10	
Balasore	945,280	82	15	6		9	•	5	• •	57	116	92	89	398	-42	
Hazaribagh	1,104,742	1		1	1	•				···.				7	900.	
Loharduggs	1,609,244	10	15	12	5					1	"	l	1 -	51	.03	
Singbhum	561,964								• ""	"	""	1	2	8	*005	
Maabhum	1,058,228				1					100	907	980	1	3	.005	
Ratio of Douths per 1,000 of	66,697,103	669	• .01	474	295	214		66	72	186	267	386	505	87590	-02	
Population		.01		1007	.004	.008	.001	90009	-001	'002			'007	.02		

OFFICE OF THE SANITARY COMMR. FOR BENGAL,

The 15th May 1887.

R. LIDDERDALE, M.D., Deputy Surgeon-General, Sanitary Commissioner for Bengal.

RESOLUTION.

Darjeding, the 29th October 1887.

BANITATION.

READ-

The Report of the Sanitary Commissioner for Bengal for the year 1886, including the Report on Vaccination in Bengal for the year 1886-87.

Read also-

The Report for the previous year and the Resolution recorded upon it.

The remarks of the Bengal Government on the length of the Sanitary Commissioner's report for 1884 had the desired effect of reducing to some extent the size of the volume for 1885. The Government of India, in reviewing the Report and Resolution for the latter year, called particular attention to this fact, and remarked that the report appeared to be capable of still further abridgment, and that the statistics of the province of Bengal, in their present state of imperfection, hardly called for such exhaustive criticism as they had received at the hands of Dr. Lidderdale. Notwithstanding the fact that Dr. Lidderdale's attention was specially directed to these remarks, the Lieutenant-Governor regrets to observe that the report for 1886 contains 163 pages, being indeed very little shorter than the report for 1884, the "inordinate length" of which was condemned by the Government of India. Sixty-eight pages of the report are devoted to the personal proceedings of the Sanitary Commissioner and his subordinates—no doubt a useful record, but containing much which need not be embodied in an annual report. Sir Steuart Bayley is of opinion that the results of the year's administration can well be placed before Government in a report of 50 or 60 pages, and he trusts that the Sanitary Commissioner will aim at reducing the report of 1887 to some such dimensions.

2. Registration of Births.—Births were registered in 45 towns against 46 in the preceding year, showing a ratio of only 21.04 per 1,000 against 24.71 in the previous year. As the work of registration in those municipalities in which Act IV (B.C.) of 1873 is in force has passed from the Police to the Municipal Commissioners, Sir Steuart Bayley hopes to see some improvement on these "radically defective figures;" but to accomplish this end the close and

sustained attention of the Commissioners will be necessary.

3. Registration of deaths.—The ratio of deaths to population was 21.99 per 1,000 of the population against 22.74 in 1885, the ratio varying from only 13.24 in Mozufferpore to 36.17 in Shahabad. As the year was a healthy one, it is not necessary to infer any retrogression in registration, the number of deaths from cholera alone having decreased by 55,399. Much seems to depend on the individual interest taken in the matter by different Magistrates and police officers. A copy of paragraph 4 of the report will be sent to all Commissioners and to the Inspector-General of Police for communication to Magistrates and District Superintendents of Police. It will also be sent to the Municipal Commissioners of towns in which the Compulsory Registration Act is in force. The provisions of this law were extended during the year to 31 towns, making a total at the close of the year of 148 towns and one rural area in Darjeeling.

4. Causes of mortality.—The following table shows the death-rate from various causes during 1886, 1885, and the quinquennial period 1881-85:—

	· /*-	P	ROPORTIO	N OF DRA	THO PER 1	,000 or Po	PULATION		#.4
•	In 1886.		In 1885.		In 1881-85.				
•	Urban	Rural.	Province.	Urban.	Rurs).	Province.	Urban.	Rarel.	Province.
Cholera Small-pox Pevers Bowel-complaints Injury Other causes ALL CAUSES	4·12 ·08 12·20 3·77 ·50 6·51	1 70, 200 16:11 73 43 974 21:79	1 78 -06 15:97 -84 -43 2:88	5-22 - 53 - 14-40 - 4-12 - 50 - 7-02	2.63 -14 15.79 -85 -43 2.66	2:62 *14 15:75 96 *48 2:81	4*.38 *55 15:08 8*79 *42 6:13	1.91 .21 14.46 .78 .36 2.24	1 '99 23 14 '48 '89 '34' 2 '38

The death-rate in rural circles was 21.79 per 1,000, and in urban circles 27.29. The figures from 1881 to 1886 tend to show that urban circles are more unhealthy than the rural areas, and that better registration in the former cannot alone account for the widely divergent ratios. With reference to Dr. Lidderdale's remarks regarding the mortality among European seamen and the native floating population, the insanitary condition of the river and its causes have been noticed in paragraph 7 of the Resolution on the Report of the Health Officer for 1886, and the necessary orders have been passed. The opinion of the majority of local officers is that the year 1886 has been healthier than the preceding year. This opinion is endorsed by the Sanitary Commissioner, who attributes it principally to a decrease of cholera and small-pox, and a reduction in the price of food grains owing to a good harvest.

- 5. Cholera.—The recorded deaths from cholera were 118,369, or a ratio of 1.78 per thousand, against 173,767, or a ratio of 2.62 in 1885. The disease attacked 21,567 villages, or 9.33 per cent. of the total number of villages in the Province, against 29,239, or 12.61 per cent in 1885. In paragraph 35 a table is given showing the meteorological peculiarities which obtained during different periods of cholera outbreak in certain tracts, but the Sanitary Commissioner expresses an opinion that this method of enquiry is not likely to throw much light upon the causes of the disease. Meanwhile, as he remarks, the conditions which foster the disease are well known, and what the Sanitary Department require is more power and more money to remove them. In this connection he has given interesting details regarding the outbreak and prevalence of cholera in different districts, and some of the instances cited by him show conclusively that even the educated portion of the community have not yet universally realised the necessity for general sanitation, and especially for a pure water-supply. The Commissioners of Baraset, when advised to set aside certain tanks for drinking water, urged that bathing was as necessary as drinking. The Commissioners of Baduria declined to interfere with the "time-honoured custom" by which Mahomedans bury their dead within their homesteads. Sir Steuart Bayley was under the impression that this custom had been to a great extent given up, but is surprised to hear of its continuance even in municipalities. The remarks of the Sanitary Commissioner on this head will be communicated to, and considered in, the Municipal Department. In other instances the outbreak of cholera is clearly traced to the use of impure water for drinking or culinary purposes. The details given in one or two cases show that the water used was unfit to be drunk even by cattle. Wherever there was a severe outbreak of the disease, all or almost all the usual insanitary conditions were found to exist, namely, filth, foul air, impure
- 6. Small-pox.—The recorded number of the deaths from small-pox, which had decreased from 18,533 in 1884 to 9,563 in 1885, showed a still further fall to 4,049. This is the smallest number yet recorded, the mean average of the decade 1876-85 being 15,317. It was, moreover, reported by several medical officers that many of the cases returned as small-pox were really cases of measles, cruptive fevers, or pulmonary complaints. The great immunity from the disease enjoyed during the year under report is doubtless due to the extension of vaccination during recent years. Fifty-five per cent. of the total mortality occurred in the seven districts of the Patna Division, to only two of which has vaccination yet been extended; 31 per cent. of this mortality occurred in the district of Chumparun alone Statistics have for several years shown that 75 per cent. of the mortality from this disease occurs among infants and children.
- 7. Fever.—The recorded mortality from fevers was 1,057,296, or a ratio of 15.97 per thousand of the population under registration, against 1,042,142, or a ratio of 15.75 in 1885. The mean death-rate of the decade 1876-85 was 12.27. It is noticeable that during the previous decade the urban population suffered from fever considerably more than the rural; but during the year under report the ratio of mortality was only 12.29 in urban circles, while it was 16.11 per 1,000 in rural circles. The death-rate exceeded 20 per thousand in ten districts, the worst districts being Julpigoree (31.01), Shahabad (29.20), Pubna (27.68), and Rungpur (27.12). Burdwan and Beerbhoom do not figure among these districts, but Nuddea stands ninth on the list. The district

spleet and liver, debilitated constitutions, pulmonary and enteric complications; and other sequelæ; and among the causes assigned are dense jungle, imperfect drainage, rank vegetation, bad water-supply, silting up of bis and tanks, water-logged soil, burial of dead within homesteads, vicissitudes of temperature, general uncleanliness, insufficient clothing, poor food, damp and improperly-constructed houses In Khulna an extremely virulent type of fever occurred. Assistant Surgeon Umesh Chunder Ghose, Deputy Superintendent of Vaccination, found that 79 per cent. of the children examined by him in the Satkhira thana had enlargement of the spleen; in several villages in thana Magoora the disease was present in every house; and in thana Kalarooa, which suffered much, the water of the river Betna was found to be so bad as to kill the fish in it. The District Magistrate will be asked to inquire further during the ensuing cold weather into the causes of this outbreak.

8. Mortality from other causes.—The mortality from "bowel-complaints," "injury," and "other causes" during the year amounted to 55,893, 29,081, and 190,818 respectively. The corresponding figures for 1885 were 63,808, 28,956, and 186,209. In connection with the first of the above heads, it is a noteworthy fact that hill diarrhea "now occurs in Darjeeling with seasonal regularity during the early months of the rainy season, when not a household escapes it, although in former years it was one of the advantages claimed for Darjeeling as a sanitarium that it was free from this plague of other hill stations." The causes of the disease are probably increase of population and

overcrowding.

9. Vaccination operations.—The particulars given in the report regarding vaccination are for the official year 1886-87. As regards this portion of the report, which covers 30 pages, Sir Steuart Bayley would remark that the minute details given no doubt find a fitting place in reports submitted by subordinates to the head of a department; but they are quite inappropriate in a report submitted to Government by the head of a department. Such a report should summarize the results of the year's administration, and deal with matters of importance and salient features in such a way that they can be readily seen and reviewed by Government. Extremely minute details are given regarding the sources and character of the lymph employed during the year, the production and employment of bovine lymph, operations performed, local opinion on the value of bovine lymph, &c.; while several paragraphs are taken up with a full account of the results of certain experiments. These would be appropriate in a special report submitted with a view to some special action being taken, or to some change in a policy hitherto followed; but they are unnecessary in an annual administration report.

The following table shows the total number of vaccination operations per-

formed during the year under report and the previous year:-

Total number of Vaccinations performed.

Cirole	8.					1886-87.		1885-86,
Calcutta	•••	•••	•••	,	•••	10,563		12,365
Metropoli	tan Circl	les ta, including o	 erations	in Central	Vac-	374,390	•	373,347
cination			•••		• • • • • • • • • • • • • • • • • • • •	14,337	•	14,044
		Total of Metr	opolitan	Circles	•••	388.727	•	387,391
Darjeeling	z Circle	***		***		290,291		252,562
Ranchi C		***		•	•••	169,385		126,426
Sonthal P	ergunna]	ha Circle	•••	•••	•••	143,913		114,539
Eastern B	lengal Ci	rcle	•••	•••		387,281		286,032
Qrissa Cir	rele	•••	•••	•••		66,277		57,681
Behar	**	•••	•••	•••	• • • •	65,739		47,178.
	4pa	Total of Vac	cination	Circles		1,522,176		1,284.174
Municipal	lit fe s, Di	spensaries, &c.	•••	•••	•••	88,101		84,822
		. •	GRAN	TOTAL	*** #	1,610,277		1,368,996
•	_							

Every circle contributed to the increase except Calcutta, where there was adiminution of 1,802 operations, said to be chiefly due to the smaller number of unprotected, children. A proposal came up during the year for the employment of women in the Vaccination Department. The Sanitary Commissioner was not in favour of the proposal on the grounds that vaccination is freely accepted from the present agency, and that no difficulties in this respect arise from the zenana system; whereas operations may be retarded and complicated by the introduction of a new element, difficult to control and not easily moved about. Sir Steuart Bayley did not think it necessary to take any further action on the proposal, though he is by no means sure that Dr. Lidderdale's objections are conclusive. As regards the work performed by the licensed and Government agencies, it is only natural that the former should have actually accomplished more, as the number of licensed operators is 1,811, while there are only 285 Government operators; but the total number of vaccinations performed by each class shows that each Government vaccinator performed on an average 1,443 operations, while the number performed by each licensed vaccinator was only 613.

The total expenditure on vaccination during the year amounted to Rs. 1,54,084-5-8, of which Rs. 67,980-7-8 was the cost of maintaining the Government agency, and Rs. 74,093-10-6 the cost of supervising the licensed agency, while Rs. 12.010 3-6 was paid by municipalities. The licensed vaccination system was considerably extended during the year. Revised rules were sanctioned, and it is hoped that they may put a stop to some of the irregularities and abuses which have been brought to notice. It is gratifying to observe that the opposition to vaccination is gradually giving way before the perseverance and persistency of the Vaccination Department; in some districts it is willingly accepted, and in others eagerly

sought for.

10. The Compulsory Vaccination Acts.—The Compulsory Vaccination Act V (B.C.) of 1880 is now in force in 114 towns, four cantonments and nine rural areas, having been extended to ten towns during the year under report and to 19 others on the 1st April last. The amending Act II (BC) of 1887 was passed just after the close of the year. It would appear from the Sanitary Commissioner's report that the extension of the Act has done not good in many cases, the requirements of the law not having been carried out. The attention of the Magistrates concerned will be drawn to paragraph 155 of Dr. Lidderdale's report.

Act IV (B.C.) of 1865, prohibiting inoculation, is now in force everywhere with the exception of seven districts and certain than of three other districts.

Village Sanitation.—In a memorandum, dated the 25th February 1887, reviewing the Bengal Sanitary Report for 1885, the Army Sanitary Commission proposed a scheme of organised sanitary reform which, if carried out on the scale which they appear to contemplate, would undoubtedly lead to a marked improvement in the health of the people of Bengal. After commenting on the highly unwholesome conditions prevailing in most of the villages inspected by the Sanitary Commissioner and his assistants, and noticing the vast numerical preponderance of dwellers in villages over dwellers in towns, the Commission repeat the opinion expressed by them in former years that "the most important sanitary problems in Bengal are those connected with the population of villages." Owing to "the apathy or indifference displayed by the people to the simplest elements of sanitation" and their "longcontinued filthy habits," the Commission regard these problems as hopeless "unless some more effectual method be adopted for overcoming apathy and substituting active and efficient work for it." The method advocated in the memorandum is of a simple and searching character. It consists in calling in the aid of an experienced Sanitary Engineering Department to apply its principles and experience to each case as it arises." Where the soil of a village has become polluted by persistent neglect of sanitary precautions, "the alternative at once suggests itself of selecting new sites for such villages, placing the sites in good sanitary state, laying down an authoritative code of village sanitary law, with means of execution, and inspection, and then removing the village by degrees. The vacated sites would have some value as manured land." The duty of carrying out these extensive reforms, and of seeing that the people, when settled in their new homes, do not revert to their

former habits of life, would, it is understood, be entrusted to the Sanitary Engineering Department which the Commission proposes to constitute.

There can be little doubt that the internal arrangements of most villages in Bengal go far to bear out the strictures of the Army Sanitary Commission. Out of 5,206 villages inspected in 1885, the period dealt with in the memorandum, nearly all were conspicuous for sanitary defects, amply sufficient, if regarded solely from the scientific point of view, to justify the introduction of the sweeping reforms suggested by the Commission. A considerable amelioration of the public health would probably result from the adoption of these measures, which embody the latest ideas of hygienic experts, and appears they only practicable admirably adented to extend the order and appear, were they only practicable, admirably adapted to attain the ends for which they are designed. The history of the Mohommedan dynasties no doubt furnishes us with instances (not always successful) of the entire population of large cities being forcibly removed to new sites; but neither the legal howers nor the financial resources at the disposal of the Lieutenant-Governor are such as to enable him to hold out any prospect of being able to adopt the measures which have the advocacy of the Army Sanitary Commission. Projects of material improvement necessarily involve some consideration of ways and means; and in this case it may be feared that even if the wishes of the people concerned could be entirely disregarded, still the value which (as the Commission point out) the abandoned village sites would possess "as manured land" would hardly suffice to meet the cost of demolishing the existing houses, acquiring new sites, and in fact removing and rebuilding the greater number of the villages in Bengal. For the present, then, Sir Steuart Bayley regrets that he cannot see his way to giving effect to the views of the Commission, and meanwhile we must be content with the humbler task of doing all that our resources will allow to improve existing conditions.

of the preceding paragraph, it is not satisfactory to observe that, though there was an increase of municipal income, the amount expended on sanitation by municipalities was somewhat curtailed. The Sanitary Commissioner complains that nothing is done towards the removal of grave sanitary defects, while plenty of money is forthcoming for lighting, watering roads, and education. Dr. Lidderdale cites some instances in which either nothing was spent on sanitation proper, or in which the amounts allotted were clearly inadequate; but Sir Steuart Bayley is unable to agree that education can properly be described as a secondary requirement. Again, the Inspector-General of Police annually complains of the inadequate sums spent on lighting; and no doubt good lighting goes a long way towards putting a stop to the commission of theft and house breaking at night. Although, however, the Lieutenant-Governor is unable fully to accept Dr. Lidderdale's views on these points, he is satisfied that, in some municipalities, the allotments made for sanitation are

small in comparison with the amounts devoted to other objects.

14. Sanitary works.—In the town of Darjeeling the water-works scheme was extended, while a scheme for supplying Jamalpore was brought into operation during the year. The Bhagulpore scheme is not yet complete. A scheme for supplying Puri with good drinking-water is now under the consideration of Government. The question of a filtered water-supply for Howrah is not being pushed forward with that energy and determination which so important a matter calls for. The orders passed by Government in 1883 and 1885 distinctly stated that the condition on which Government undertook, under section 7 of Act IV (B.C.) of 1884, to relieve the municipality of two-thirds of its police charges, was that a satisfactory scheme for the supply of filtered water to the town would be adopted within a reasonable time. The Lieutenant-Governor has already had occasion to intimate that, if the scheme be not pushed forward in earnest, he may have to reconsider this engagement. The question of drainage is beginning to attract more attention, and during the year some satisfactory progress was made in this direction.

15. Legislation.—Act VI (B.C.) of 1886 was passed during the year under report. It provides for the voluntary registration of births, deaths, and marriages among persons to whom the provisions of the Indian Succession Act, the Indian Christian Marriage Act, and the Parsee Marriage and Divorce Act apply. It has been decided in the General (Ecclesiastical) Department of this Government that

the Inspector-General of Registration is to be appointed Registrar-General under this Act, and that his department must be largely used in working its provisions. He has accordingly been asked to submit detailed proposals for submission to the Government of India. The Bill to amend the Vaccination Act was passed as Act II (B.C.) of 1887 after the close of the year. This Act gives larger powers of vaccination and inspection, and its working should be briefly noticed in the report for the present year. Act III (B.C.) of 1886 (known as the Ghee Act) was passed during the year. It is now under the consideration of Government whether any further legislation is required regarding the adulteration of ghee. The Local Self-Government Act III (B.C.) of 1885 was introduced during the year into all the districts in the province, except the Chota Nagpore Division, and the districts of Darjeeling, the Sonthal Pergunnahs, and the Chittagong Hill Tracts. It will be considered in the Municipal Department whether sections 87 to 91, relating to sanitation, and sections 92 to 96, relating to vaccination, should be introduced into these districts.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

Offg. Chief Secy. to the Govt. of Bengal.

No. 3354P.

Copy of the above Resolution, and of the Report, submitted to the Government of India in the Home Department for information.

No. 3355P.

Copy of the above Resolution forwarded to the Sanitary Commissioner for information and guidance.

No. 3356P.

Copy of the above Resolution, and of the Report, forwarded to the Inspector-General of Civil Hospitals for information.

Circular No. 26P.

Copy of the alone Pesolution, and of the Report, forwarded to all Commissioners of Divisions for information, with the request that paragraph 4 of the Report may be communicated to District Magistrates and Municipal Commissioners of towns in which the Compulsory Registration Act is in force. The attention of the Magistrates should also be drawn to paragraph 155 of the Report.

No. 3357P.

EXTRACT paragraph 3 of the above Resolution, and paragraph 4 of the Report, forwarded to the Inspector-General of Police for information and communication to District Superintendents of Police.

No. 3357 P.

Copy of the above Resolution, together with the extract paragraph 5 of the Report, forwarded to the Municipal Department for information.

By order of the Lieutenant-Governor of Bengal,

H. W. C. CARNDUFF,

Offg. Under-Secretary to the Govt. of Bengal.

CALCUTTA,

The 9th November 1887.

H. P.—Reg. No. 8821C—629—9-11-87.